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ORIGINAL ARTICLES.

CURE OF CLEFT PALATE BY A DOUBLE FLAP OPERATION AND CLOSURE WITH THE BURIED TENDON SUTURE.

Read in the Section of Dental and Oral Surgery, at the Forty-first Annual Meeting of the American Medical Association, at Nashville, Tenn., May, 1890.

BY HENRY O. MARCY, M.D.,

OF BOSTON, MASS.

Nearly all surgical operations have had their distinctive modifications, with surprising gain in the result, based upon the knowledge of the rôle of bacteria in wounds. In large measure, however, the surgery of the mouth, the throat, and the nasal passages, has proved an exception, since all wounds of these tissues, as ordinarily treated, must be looked upon as extremely liable to become infected from the ever-present bacteria, existing normally in the mucous secretions of the tract, and necessarily conveyed to it in respiration and in the taking of food.

Dentistry, as an art, may be said to have commenced with the present generation; as a science, within the last few years; since by the labors of Miller, Nelson, Andrews, and others, the demonstration is ample that dental decay is dependent upon bacterial development within the structures of the teeth. All scientific observers now agree that the preservation of a diseased tooth is dependent upon the removal of the infected portion, and the treatment of the member in such a way as to preserve permanently its tissues aseptic. These principles, when applied to the treatment of a single tooth, are comparatively simple and easy to carry into effect. When the cancellated structure of the jaw, or any of the bones forming the nasal, or oral tract, are involved, the conditions are much more serious, and the limitations, or removal of the infected parts, often form problems very difficult of solution.

Wounds of the soft parts, even when made through comparatively healthy tissues and closed with the greatest nicety, by the surgeon, at the time of operation, often heal very unsatisfactorily, becoming the seat, at least, of a local infection, and repair either fails entirely, or goes on slowly by the processes of granulation. This has its explanation from the great difficulty of excluding infective material from the wounded surfaces, and the reason why general septic infection with its attendant danger is not more common, is found in the extraordinary vascularity, affording a better protective nutrition of the parts involved.

Plastic surgery of the oral cavity has made comparatively little advance, for the above reasons, although it is almost entirely revolutionized, in other parts of the body, by modern surgical procedure.

Operative measures for the relief and cure of cleft palate generally fail on account of non-closure of the wound, dependent upon infection and difficulty of the retention of the parts at rest, especially at its free, or distal, extremity. During the last few years the attempt at repair is less often made by the surgeon, than formerly, doubtless, in large measure, due to the extremely ingenious and useful mechanical devices in the way of artificial plates, one of the distinctive triumphs of American mechanical dentistry.

I confess myself to have given over the field, as one entirely unfruitful of surgical relief, until within the last year, when I carried into effect, in a single case, the method which forms the subject of this brief contribution.

Miss J., age 25, a strong and healthy woman, has a congenital cleft of the soft palate with only slight indentation of the bony structures. Each half of the uvula is well developed, and by moderate tension the edges of the cleft can be brought into apposition. After a careful explanation of the intended procedure, the patient gladly availed herself of the hoped-for results from operation. Aided by Dr. Charles Bullock and Dr. S. N. Nelson, I commenced the operation by the introduction of a tracheotomy tube. With careful washing and irrigation, the nasal and oral passages were rendered aseptic, using freely a sublimate solution of strength 1–1000. After the introduction of the mouth-gag and packing the pharynx with an aseptic sponge, the soft palate was seized upon either side, the edges slightly refreshed with scissors and split laterally to the depth of about one-third of an inch. The posterior flaps thus formed were carefully joined by a very fine over-and-over tendon suture. A somewhat larger

suture, commencing at the angle at the base of the division of the flap, was carried laterally from side to side, through the centre of the soft palate, a little beyond the line of lateral division. This line of sutures extended quite to the uvula. The approximation of the sides of the wound necessarily everted the edges and by so much increased the fresh surfaces brought in contact, while at the same time it completely buried the line of sutures. The everted edges, presenting in the roof of the mouth, were then carefully joined by a very fine continuous tendon suture. Two double-looped stitches, taken as far away from the central line as possible, were then introduced in order to prevent any lateral strain upon the central wound. The mouth and nose were closed and only rarely required to be cleansed of mucus during the four subsequent days; after cleansing they were dusted with iodoform by means of the iodoform blower. Respiration went on comfortably through the tracheal tube. A large injection of weak beef tea, given once in six hours, served the purpose of food and drink. The wound remained non-infected, and repair ensued as in aseptic wounds in other parts of the body, with the exception of the tip of the uvula, where a small slough formed from over-constriction of the suture.

The above case is reported as an experimental study, and is at least instructive as giving possibilities of better surgical results than those generally obtained in this most distressing deformity. If such seeming heroic procedure, as antecedent tracheotomy, may meet the approval of the profession, is a question for discussion. Without it, all attempt at rigid antiseptic conditions of the parts is seemingly futile. External wounds of the body are readily sealed from bacterial infection by the simple application of iodoform collodion, but thus far all attempts have failed in protecting mucous surfaces by germ-proof dressings, and we are under the necessity of making the cavity itself aseptic, and maintaining it in this condition until repair can ensue, or of accepting the dangers of infection which, when respiration is allowed to go on in the usual manner, generally gives failure in result.

The advantages of the use of the tendon suture in this operation appear to be equal to those claimed for it in operative wounds in other parts of the body; and, if this is true, it is the only suture material to be recommended for this operation. If it shall happen to me to attempt again the repair of these parts, a modification of instruments would simplify, in a considerable degree, the operation. Forceps bent at a suitable angle, the blades protected by rubber tubing to prevent injury of the enclosed parts, would greatly facilitate the seizure and holding of the flap, preparatory to splitting it. The division also can be effected easier by a knife, the blade of which is at a suitable angle to the handle. The needle forceps also need special adaptation of the curve for the easy introduction of the sutures. Any practical surgeon, however, can effectually operate with the instruments ordinarily at his disposal.

Boston, 116 Boylston St., May, 1890.

DR. JOHN S. MARSHALL, of Chicago, said: At the request of the Secretary of the Section I have consented to open the discussion upon this paper, and through the courtesy of Dr. Marcy I have had an opportunity to give it a somewhat careful reading. I consider the paper a valuable one, in that it presents an entirely new method of operation for closing cleft palate. Whether it will revolutionize the common practice in this operation, time and experience only can establish. It is, however, a step in the right direction, as it looks toward establishing and maintaining an aseptic condition of the mouth during the operation and the process of repair in the wound.

Those of us who have had experience in operations upon the soft tissues and bones, in and around the oral cavity, will appreciate how great a boon thorough aseptic conditions would be in all wounds opening into the mouth, and how difficult it has been to prevent suppuration in compound fractures and other extensive injuries to the maxillary bones. Miller, in his researches, has found more than a hundred forms of microorganisms in the human mouth, including nearly all the pathogenic forms known to science, while the most cleanly mouths are found to be the constant habitat of a variety of forms. It would therefore seem to be an Herculean task to cleanse the mouth and render it thoroughly aseptic even by the method suggested by the essayist.

It has been my practice for years to combat the tendency to infection by the use of solutions of bichloride of mercury, and of carbolic acid of various strengths, the parts being irrigated and sprayed with them at frequent intervals. Dr. Marcy's method, however, could hardly be utilized in cases of severe compound comminuted fractures of the jaw, where many times, under the most favorable circumstances, it requires from two to three weeks to heal the external wound, and serious results might follow such prolonged tracheal breathing and feeding by the rectum.

In the operation of staphylorraphy, I believe the aseptic method will prove of great value, though to the patient tracheotomy and the plugging of the throat and nose will seem very formidable, and will deter a great many from availing themselves of the offered benefits.

With the new features of the operation itself, I am still more pleased.

The great difficulties in the way of a successful result in closing of the *vellum palati* have been to obtain perfect coaptation of the freshened edges, the prevention of tension upon the stitches

and perfect rest of the parts. By Dr. Marcy's operation these are largely overcome. In the lateral splitting of the *vellum* along the border of the cleft, the fresh surfaces are greatly increased, and by that much it would seem to add to the chances of successful union.

The method of stitching is unique, and the use of the buried tendon suture adds to the possibility of a successful result, though at first thought it would seem somewhat difficult to accomplish, except by instruments specially devised.

The result in the case reported is, however, no better, in fact, not so good, as in some cases which have been treated by the old methods of operating, as primary union through the whole extent of the wound is sometimes obtained by them. By the old methods about one in four are failures, but Dr. Marcy's method gives promise of better results, and until such time as it has received a fair trial we should withhold our judgment.

I trust Dr. Marcy will keep the profession advised in regard to all his future efforts in this direction, and I assure you it shall have a fair trial at my hands.

A CASE OF STATIC LENTICULAR ASTIGMATISM ACQUIRED BY THE LONG CONTINUED USE OF SPECTACLES HAVING A FAULTY POSITION.

Read in the Section of Ophthalmology at the Forty-first Annual Meeting of the American Medical Association, Nashville, Tenn., May, 1890.

BY GEO. E. FROTHINGHAM, M.D.,
OF DETROIT, MICH.

That dynamic astigmatism of the lens may exist has been recognized since Donders published his classical work in 1864, and it is now generally conceded that an unequal contraction of the ciliary muscle may exist, producing irregular curvature of the crystalline lens and often producing a sensation like that attending accommodation for the *punctum proximum*, with its accompanying fatigue and asthenopic symptoms. This astigmatism has often been observed in practice associated with corneal astigmatism, which it modifies in various degrees, sometimes increasing, sometimes partially, sometimes fully, and at other times over-correcting it. Owing to a cessation of this action as a result of loss of accommodation from age or from the use of mydriatics, corneal astigmatism that had previously been concealed, becomes manifest. Or what had appeared to be a myopic astigmatism may be shown to be a hyperopic corneal astigmatism. The question as to whether this dynamic astigmatism may lead to an altered form of the lens from a spherical to an ovoid form, so as to constitute a condition of static lenticular astigmatism, is one which has not been plainly demonstrated, though from theoretical considerations we must accept it as a probable result of long continued action of this kind at a period of life when the eye is developing or while the lens responds actively to the contractions of the ciliary muscle. A permanent and symmetrical increase of the convexity of the crystalline lens, leading to myopia, has long been acknowledged as due to the excessive and long continued strain of accommodation. This kind of myopia, sometimes called *plesiopia*, was demonstrated in the early investigations of refraction and accommodation, and Stellwag credits Cramer with having been the first to demonstrate by suitable instruments an increased curvature of the lens in some cases of myopia, just such as is found in emmetropes when accommodating for a near object. While many of the ordinary pursuits of life have furnished abundant opportunity to observe the effect of an overstrained accommodation to produce myopia, only careful observation of cases both before and after, the use of improperly fitting glasses, can be expected to demonstrate the production of permanent lenticular astigmatism. Experiments with cylindrical lenses, for obvious reasons, would be highly improper and would not be submitted to. The faulty position of spherical lenses, so generally met with, and acting in the same way cylinders would, afford us the opportunities for observing the result, if only careful observation of the condition of refraction is made and recorded both before and after the prolonged use of such spectacles. In the following case such observation was made and as published reports of the kind have not come to my notice, I thought it worth while to put this case on record:

W. F. K., aged 19, of Grand Rapids, Mich., came to me on the 19th of October, 1881, suffering from asthenopia. Vision of each eye was $\frac{20}{20}$ +, and there was no manifest error of refraction on subjective test. Græfe's test showed 2° insufficiency of the internal rectus, though he could converge to 2⅜ inches. In reading he found comfort from the use of +1 D. S., slightly decentered so as to act the same as weak prisms, base inward. I next saw him on March 1, 1882. He stated that he was much relieved by his glasses until a short time before this second visit, but that his symptoms had lately returned and he was as much troubled as formerly. His vision was still $\frac{20}{20}$ sharp, and there was no manifest error of refraction or muscular insufficiency. He could use his eyes with comfort for reading only when a convex spherical, 1.50 D. was supplied, and so these were temporarily prescribed and he was advised to rest his eyes by the use of atropia if his symptoms were not soon relieved. On the fourth day after this he returned as bad as ever, and the use of atropia was commenced. On the 6th of

March a careful test revealed hyperopia varying from 0.50 D. to 0.75 D. in each eye. No astigmatism was manifested. Atropia was continued and on the ninth and eleventh tests were carefully made with the same result. Atropia was continued and on the thirteenth an examination showed accommodation completely relaxed and the patient manifested no hesitancy in selecting glasses, H.= 0.75 D. in each eye with no astigmatism. With H. corrected vision of each eye was $\frac{20}{20}+$. Atropia was continued and on the fifteenth and seventeenth tests were made with the same results. Atropia was now discontinued and on the twenty-seventh a test showed H. 0.75 D. in each eye. Convex sphericals, 0.75 D. were prescribed for constant wear, and he was given +1.50 D. S. for reading and instructed to begin use of his eyes gradually by Dyer's method, holding his book at sixteen or eighteen inches distance. The patient was an industrious student of law, and read almost constantly.

I did not see him again nor did I hear from him until the 27th of September, 1886, when I was written to by Dr. R. J. Kirkland, an oculist of Grand Rapids, asking for my notes of his case. The patient had consulted Dr. K. on June 22, 1886, and as he had continued his excessive reading, was again suffering severely from asthenopia, and a test was made which did not call for the glasses he was wearing for distance at the time, *i. e.* +0.75 D. S., that I had prescribed for him more than four years before. At this date he rejected all glasses for distance, except a $-\frac{1}{60}$ C. ax. 90°.

The following notes of the examination on June 22, 1887, and subsequent treatment, have been kindly furnished to me by Dr. Kirkland: R. E. V..= $\frac{20}{40}+$, with $-\frac{1}{60}$ cyl. ax. 90 V = $\frac{20}{20}$; L. E. V.= $\frac{20}{40}+$, with $-\frac{1}{60}$ cyl. ax. 90 V = $\frac{20}{20}$. Nine instillations of a solution of atropia, eight grains to the ounce, were made within three days, and accommodation completely paralyzed. In this condition his refraction was changed to hyperopic astigmatism in the vertical meridian. Record showed R. E. V. = $\frac{20}{20}-$, with $+\frac{1}{60}$ cyl. ax. 0°, V = $\frac{20}{20}+$; L. E. V. = $\frac{20}{20}-$, with $+\frac{1}{60}$ cyl. ax. 0° V = $\frac{20}{20}+$. After the effects of the atropia had passed off an examination showed a like result, and these convex cylindrics were prescribed for constant use. After this no further trouble was experienced and two years afterward, when Dr. K. reported last to me, the refraction had continued the same and the patient could use his eyes as much as he desired without the least discomfort. In his first letter Dr. Kirkland informed me that the patient had broken his reading glasses soon after he last consulted me, and, on applying to an optician, he had been given + 3 D. S., which he had used for reading for the last four years and a half preceding Dr. K's. examination. I wrote to Dr. K. stating my belief that this astigmatism had resulted from the faulty position of these strong lenses, which as usully set by opticians, were probably more nearly vertical than they should be for reading. I requested him to examine with reference to this point and report to me the facts. Fortunately the spectacles had been preserved and a careful examination showed that in reading the visual axis formed a vertical angle of about 23° with the principal axis of the lens, the lenses having their horizontal axes parallel with the surface of the face. The strength of these lenses necessitated the approximation of the book to within about twelve inches of the eye. This would cause the angle between the rays of light and the principal axis of the lens to be about 6° in the horizontal meridian, leaving a balance of 17° for increase of refraction in the vertical meridian of the lens, with a consequent lessened demand on the refraction of the eye in this meridian. By experimenting at this reading distance (12 inches) with a convex lens of three dioptries, so placed before the eye that there is formed a vertical angle of 17° between its principal axis and the visual axis, I find the refraction increased in the vertical meridian to the extent of a lens of about 0.75 D. To compensate for this and avoid astigmatism, the crystalline lens must increase its refraction in the horizontal meridian to the same amount (0.75 D.). In a state of spasm of accommodation with the reading lenses off, this would appear, as it did in this case, as myopic astigmatism in the horizontal meridian. But when the spasm of the ciliary muscle was relaxed by the use of a mydriatic it would appear as hyperopic astigmatism in the vertical meridian.

In this case it appears that by this long continued exertion of the ciliary muscle to compensate for the artificial astigmatism, produced by the faulty position of these spectacles, the form of the crystalline lens was permanently changed so as to correct hyperopia of 0.75 D. in the horizontal meridian, while it left its refraction in the vertical meridian unchanged.

In the first series of tests the dioptric system of measurement was observed; in the second the inch system was followed, and in the latter case the 60-inch lens would come as near to the 0.75 D. as could be decided upon by a patient in making a subjective test. Prof. Zehender, who made a large series of experiments as to this effect of faulty position of lenses, found that a convex lens of 3 D. rotated at an angle of only 5°, caused decided blurring of vision, and he expressed his belief that permanent lenticular astigmatism could be produced by such faulty position of lenses. The above case, in my opinion, is one demonstrating the truth of this theory. The tests were made in the first instance with the greatest accuracy, both by Dr. J. G. Kennan, my assistant at that time, and by myself. Dr. Kirkland is a

very careful and competent oculist, and that the refraction of the eye had changed is shown not only by his findings in these tests, but by the fact that when asthenopic symptoms became so unbearable in 1886, the patient's distant vision was reduced to $\frac{20}{40}+$ and could only be raised to normal by supplying the cylindrical glasses.

That it was acquired static lenticular astigmatism is shown by the effect of the atropia, the former known condition of refraction, and the result obtained by supplying the required lens. Whether or not this case was of the nature I suppose, the question of proper position of lenses is one of the most important that can engage the attention of those who undertake refractive work, and a large proportion of the time of oculists, must of necessity, be devoted to such examinations. I have known of instances where a most conscientious and skillful examination of the eyes has been made and the whole object of the oculist thwarted by the optician who filled the prescription. Even the most noted opticians often pay little attention to the measurements for frames that are furnished by the oculist, and these measurements are often, I believe, far too hastily and imperfectly made. Almost no attention is paid to that rotation of the lenses that is required to bring their principal axis to correspond with the line of vision, and often we find them set half an inch or so farther forward than they should be, and elevated to the eyebrows, or set down upon the cheeks. In this way great injustice is done to the oculist, who is alone held responsible if annoyance results to the patient, who often never gives him an opportunity to examine the glasses, and correct the faulty position resulting from a disregard of his directions.

One of the most important aids to work of this kind will be the construction of such trial lenses and frames as to allow lenses to be placed in a proper position while tests are being made. Another will be the device of some more suitable adjustable frame for readily making the measurements for the guidance of the optician in making the frames and mounting the lenses prescribed. That some ingenious mechanic will apply himself to this task and give us that which many of us so long have sought, is earnestly wished by not a few whose time is so taxed by the present methods commonly adopted in practice. Whoever trusts this work of fitting the frames to an optician will often find his prescription nullified, and his reputation injured by the incompetence or unfaithfulness of the spectacle venders who style themselves opticians.

I have no doubt that many cases of astigmatism of a low degree may be acquired by a faulty position of spectacles, and that we fail to relieve many cases of asthenopia, either because we do not pay sufficient attention to the position of the lenses while making the test, or in measuring for frames, or because the optician has disregarded our directions in the matter.

DR. RANDALL called attention to the fact that the change in astigmatism has been proved by the ophthalmometric measurement. Ciliary action is, therefore, excluded, as well as lenticular obliquity. It has been shown that "astigmatism against the rule" is extremely frequent in glaucoma; and further, both clinical and experimental study has shown increase or occurrence of this form of astigmatism with the rise of tension. It may, therefore, be an important prodrinal sign of glaucoma.

DR. FROTHINGHAM in closing the discussion said: I have presented this case for the reason that I think it may be of some value in the settlement of this theory. I admit it wants the element of certainty that can only exist where the curvature of the lens is accurately measured both before and after the appearance of the astigmatism. In ordinary practice this measurement of curvature is not made. In this case, however, an altered form of the lens is the only rational explanation that harmonizes with all the observed facts. The paper will furnish my answer to most of the questions raised.

It may possibly be true that corneal astigmatism may have developed in this case, but the direction of the axes of greatest and least refraction do not correspond to what we would expect from corneal change while they do with the theory of acquired lenticular astigmatism from the cause supposed. The degree of astigmatism acquired also just corresponded with the theory advanced. It would be a strange coincidence if changes of the cornea should extend to just this degree, and in meridians to correspond to this.

LENS MEASURER.

Read in the Section of Ophthalmology at the Forty-first Annual Meeting of the American Medical Association, Nashville, Tenn., May, 1890.

BY ROBERT TILLEY, M.D.,
OF CHICAGO, ILL.

The instrument I have to exhibit to you is not my invention. It is a device for the practical ready and accurate measurement of the curvature of lenses, and indirectly, of course, the measurement of the focal lengths of lenses of the average size used in optical devices for the amelioration of defective vision. It is of interest to us in the ready means it affords of checking formulæ for glasses, and in readily and accurately determining the combination of lenses which may come under our observation in our daily dealings with patients. It is not an easy matter to determine, by the method of neutralization, the combination of a compound lens. At any rate, I do not blush to acknowledge that it is not an easy matter for

me. Take any example at random: S. + 4.00 ○ + 1.00 c. ax. 180; or, S. — 2.25 ○ — 0.75 c. ax. 45°. It is not difficult to determine the axis of a cylinder, but this device renders it easier, and at the same moment, with a single turn of the hand, it gives us the radius of curvature, and by inference, the focal power.

I will first explain, by a diagram, the general principle on which the instrument is constructed, and then it will be evident to you that it is capable of doing the work it claims to do, and then the instrument will be handed to you for your own personal demonstration. I have brought a few lenses with me for that purpose.

The diagram (Fig. 1) shows the face of the instrument. It is represented as measuring a plano-convex lens of + 3 dioptrics. The highest part of the dial is marked o. The space on either side down to the corresponding part below is divided similarly, the divisions gradually but slightly decreasing. On the face is a movable pointer. When this pointer is directed to zero it means that the surface being measured is a plane, or that the special part of the lens being measured is the axis of a cylinder. The left hand division, you will see, is marked plus and measures the plus lenses; the right hand division in a similar way indicates the minus lenses. The inventor tells me that in his design the order of plus and minus was reversed, but that the manufacturer, without his consent, changed it. That, however, is a detail of no practical importance, although in conformity with mathematical use of plus and minus it had been better the other way.

FIGURE 1.

From the other diagram[1] you will see the mechanism by which the pointer is moved, from which, also, the reason will become plain why the divisions of the dial are not equal. In the upper part of the figure you will see three small rods. They do not need to be specially designated. They are ground to blunt points on the upper parts. The two outside rods are fixed, but can be moved if it is desirable at any time to adjust the instrument. The middle rod is attached to a solid bar which slides up and down in a slot in the ground plate (A) of the instrument. In the figure this bar is marked B. To the bar is attached a knife-edged chain in contact with the short arm of the rack D. The fixed point of the rack is at E, and is made adjustable by the screw device, shown in the figure at F. At the lower part of the rack are the cogs which work the pinion to which the pointer is attached. The hair-spring is used to take up what is technically called "back lash," to prevent lost motion in the rack and pinion. I will add that whilst the instrument readily measures the curvature of the lens, the dial is so graduated as to show the focal lengths, being specially adjusted for lenses of crown glass; and if a variation is observed in a given lens it may be suspected that the lens is flint and not crown glass. The indices of refraction of pebbles correspond practically with that of crown glass.

It only remains for me to demonstrate the working of the instrument on a few lenses to show how rapidly and with what certainty it can be done.

[1] The drawing of this diagram having been mislaid, we are unable to reproduce it here.

ON INFECTIOUS DYSPEPSIA AND ITS RATIONAL TREATMENT BY THE ANTISEPTIC METHOD.

Read by invitation before the Mississippi Valley Medical Association at its Sixteenth Annual Meeting, Louisville, Ky., October 8, 1890.

BY FRANK WOODBURY, A.M., M.D.,

FELLOW OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA, HON. PROFESSOR OF CLINICAL MEDICINE IN THE MEDICO-CHIRURGICAL COLLEGE, ETC., ETC.

A cynical Frenchman declared that the treatment of consumption was "opium and lies;" and at times we are tempted to say that the treatment of dyspepsia is the same—minus the opium. If we confine our judgment to the numerous proprietary "sure cures for dyspepsia," now so widely advertised, this conclusion would probably be nearly correct. I hope, however, that the methods of rational medicine may so commend themselves to our favor as to escape condemnation to this category, especially when we may see our patients, by adopting them, cured safely, quickly and more or less pleasantly.

It is proper to state, at the outset, that our present consideration of the subject is limited to dyspepsia solely as related to the stomach; no reference is attempted, or intended to be made to intestinal indigestion, or to the so-called intestinal dyspepsia.

It must be very obvious to all that dyspepsia occupies a very important place in popular nosology; it is as familiar as household words. On the contrary, there is a strong disposition among many of our systematic writers on medicine to ignore the term dyspepsia, or simply to discuss it

as a synonym of indigestion. This may be due to the fact that the pathology of the disease, which Trousseau called a subject "vast and obscure," has hitherto been very little understood; on the principle that the proper way to treat a disease which we do not understand is to treat it with contempt. Most of our text-books disappoint the anxious inquirer by paying very little attention to dyspepsia, or merely mentioning it as a symptom, or as synonymous with gastric catarrh or simple indigestion. Some authorities, —Clifford Allbutt, for example—are skeptical of its very existence, and darkly hint that it serves as a convenient cloak for a host of sins of omission in the way of overlooked diagnosis of organic disease. I am willing to admit that many cases of gastric inflammation, gastric ulcer, even gastric cancer, may remain for a long time latent, or merely occasion some disturbance of digestion; but this only illustrates the well-known difficulty of diagnosis of disease affecting the viscera, and certainly is no proof that indigestion or dyspepsia may not exist where no organic affection is present. Time clears up the diagnosis of most stomach disorders, just as it does those of supposed ovarian cysts or of some uterine fibroids in young persons of appropriate sex.

It is true that indigestion, or laborious, slow and painful digestion, may be only a symptom; but, when this symptom is of constant recurrence, and seriously impairs the patient's capacity for work or his enjoyment of the amenities of life and effectually destroys his comfort and ease, substituting discomfort therefor, it is hard to convince him that it is not fully deserving of the title of disease,—by brevet at least. Does it not seem that habitual indigestion and suffering after partaking of food, in an individual, is, at least, something very much akin to disease? One of the Hipprocratic aphorisms reads as follows: "Such constitutions as suffer quickly and strongly from errors in diet are weaker than others that do not; and a weak person is in a state very nearly approaching one in disease." Here is a definition of a dyspeptic, 2300 years old: *one with a weak constitution, who suffers quickly and strongly from errors in diet.* Unfortunately, the poor dyspeptic is surrounded by pit-falls which he only discovers by tumbling into them; he is forever finding out that he has committed errors in diet, and is eternally encountering new trials and committing more errors, until he is ready to exclaim, in his extremity: "Wretched man that I am! Who will deliver me from the body of this death?" It is a fact, and a very sad one, by no means unfamiliar to readers of the daily press, that the condition of the dyspeptic sometimes becomes so intolerable that his mind is temporarily unbalanced, and he seeks surcease from sorrow and suffering by suicide. Let no man judge him harshly for the dreadful deed:—

"What's done we partly may compute,
But know not what's resisted."

With reference to the pathology of dyspepsia, I would consider it at least as much entitled to recognition as a distinct disease, in the present unsettled condition of medical nomenclature, as consumption or chorea. Like them, it is characterized clinically by manifestations of nervous disorders; so that Cullen was not very far wrong in considering dyspepsia as a neurosis under the class Adynamiæ. Like pulmonary phthisis, also, its most marked symptoms are produced (I believe) by the absorption of the products of parasitic microörganisms. Just as Philip has shown that the symptoms of phthisis are due to the absorption of toxic products of bacilli tuberculosis, I think that many of the clinical manifestations of dyspepsia are caused by poisoning by ptomaines or leucomaines. For when bacteria and other microörganisms have been accidentally swallowed with the food, if they find the conditions favorable in the stomach, they will rapidly multiply there and make it a centre of infection. When this occurs, and symptoms of disorder appear, I think it permissible to follow the general rule and apply to it the term infectious dyspepsia. By this I do not imply that it is also contagious, in the ordinary sense, but merely that the morbid manifestations are directly connected with infection by microörganisms and their products.

Lauder Brunton has gone over this ground in his papers on "Indigestion as a Cause of Nervous Depression," and on "Poisons Formed from Food, and their Relation to Biliousness and Diarrhœa;" and Sir Andrew Clark has similarly traced the cause of anæmia and chlorosis in young girls to digestive disturbance, or what he terms fæcal intoxication. We now accept, without reservation, Pasteur's demonstration that there can be no fermentation or putrefaction without the presence of microörganisms; and I think Lister's corollary, that they are also responsible for the occurrence in the living body of inflammation and suppuration, is also generally received and daily acted upon,—at least, by those of us who practice surgery. Therefore, when Abernethy bluntly said that "men eat so much that the food actually ferments in their stomachs," he went at once to the root of the matter, and indicated the true cause of the symptoms in many cases of dyspepsia. Leared has shown that heart-burn is due to the presence in the stomach of butyric acid,—a product of lactic fermentation; and nearly thirty years ago Milne Edwards declared, as the result of his study of acid dyspepsia, that "the phenomena of lactic and butyric fermentation, which are manifested in the digestive tube, may well depend upon the action of infusoria, which live and multiply in the interior of this canal,—a hypothesis which explains the production of two gases found here, viz., hydrogen and carbonic acid."

Of late years the science of bacteriology has made wonderful advance, and especially in the department of bacterial parasitism, or infection, and its relation to disease. It is known that certain microörganisms, under ordinary circumstances, are harmless to the human system; others possess virulence, and produce more or less disturbance of the bodily functions or give rise to the different varieties of specific diseases. Under normal conditions, microbes, principally harmless, constantly find their way into the air-passages and into the stomach, and, indeed, certain varieties are always found flourishing among the contents of this organ.

Abelous,[1] a recent investigator of this subject, found 16 species existing normally in his own stomach, of which 2 were micrococci, 13 bacilli, and 1 vibrio. (Of these the sarcina ventriculi, the bacillus pyocyaneus, bacterium lactis aërogenes, bacillus subtilis, bacillus amylobacter, bacillus megabacterium, and vibrio rugula had been recognized previously by other experimenters). The presence of saprogenic microbes in the stomach, therefore, being constant and not incompatible with health, it becomes necessary to inquire why fermentation or putrefaction of the food does not occur after every meal? In other words, how is practical antisepsis obtained by natural process? Three things are to be considered in this connection,—(1) the food, (2) the digestive fluids, and (3) the physical conditions attending the act of digestion. With regard to the food, we observe that effort is made to have it fresh and suitable for digestion; experience having shown that tainted food, or, as we commonly say, spoiled food, very promptly causes serious disorder, both of the digestive organs and the nervous system. The food is also, as a rule, required to be mainly of the kind that the individual is accustomed to eating, as unaccustomed food often produces disorder. The well-known antiseptic character of the digestive fluids is of great utility in preventing the development of microörganisms, but these vary, both in their quantity and quality under morbid conditions. The muscular contractions of the stomach, owing to deficient innervation, or to other causes, are often lacking in energy and efficiency, thus producing what has been called motor dyspepsia, and the movements may also be attended by pain.

With regard to the personal equation or digestive capacity of different individuals, we rarely give sufficient consideration in therapeutics to actual anatomical differences in stomachs. Some persons have stomachs many times larger than others, thus requiring more bulky food and less frequent feeding than the latter, and this difference exists even in early infancy.

As already stated, during healthy digestion fermentation and putrefaction of the food do not occur; but let digestion be retarded, or let the supply of gastric juice be insufficient in quantity or deficient in its essential elements, or let certain germs be present in unusual quantity, and indigestion, sour stomach, and the usual symptoms attending painful and tardy digestion will be produced. On the contrary, in a case of habitual indigestion, or dyspepsia, if proper measures be taken to keep the pernicious activity of the microörganisms in check, at the same time securing by hygienic and tonic treatment a proper innervation of the stomach, and especially a sufficient supply of gastric juice of good quality, the nervous symptoms, both local and systemic, will at once be ameliorated, and by continuing this plan of treatment (which I have ventured to call the antiseptic method on account of its results), and the selection of a proper dietary, the dyspeptic may be restored, if not to perfect health and happiness, as least as near as he can hope to come to them in this world.

I cannot help digressing a little just here, to note the precautions that civilized man has been taught by experience to take, in order to prevent septic infection of the contents of his stomach. He cooks his food at a comparatively high temperature, and, generally, it is eaten at once, or means are taken to preserve it by refrigeration or hermetical sealing. In thickly-inhabited parts of the world it is the custom to boil the water used for drinking purposes, and, very commonly, some aromatic or slightly stimulating herb or berry is added to make it more palatable. In fact, coffee after roasting has also decided antiseptic effects, and its infusion markedly retards the development of microörganisms in the stomach. Tea exerts a similar action, though to a less degree, but it has the disadvantage of retarding the digestion of albuminoids. Chloride of sodium is a constant feature upon all of our tables, and, doubtless, is one of the great agents in permitting advance in civilization, as it helps digestion, and is a valuable antiseptic. Alcohol has this action also, but possesses the additional advantage of stimulating the nerves of the stomach, thus increasing the rate of its movements, and also the amount of the gastric juice. When used to assist digestion, alcoholic stimulants are considered by Ringer to be invaluable, when used medicinally and with discretion. In the treatment of weak digestion, I often find the judicious use of old Bourbon to be attended by the most happy effects. It is the most reliable form in which to administer stimulants, and is infinitely preferable to adulterated French wines for this purpose.

It might be mentioned here, with regard to the question of treatment, that many of the drugs of established reputation in relieving the symptoms of dyspepsia are also known to be antizymotics. For instance, we may enumerate the cinchona

[1] Recherches sur les Microbes de l'Estomac à l'Etat Normal et leur Actions sur les Substances Alimentaires. Paris, 1889.

salts (quinine is very prominent among bactericidal agents), hydrochloric acid, nitrate of silver, the volatile oils, strychnine, arsenic, the mercurials, iodine and carbolic acid, creasote, beta-naphthol, salicylic acid, salol, resorcin, charcoal, not forgetting alcohol, which is the basis and essential ingredient in the various elixirs, tinctures and bitters. The alkalies, particularly the bicarbonate of sodium, act indirectly as antiseptics, by changing the reaction of the fluid contents of the stomach and preventing the growth of those bacteria which flourish only in an acid medium.

A very prompt and efficient method of preventing the undue development of microörganisms in the stomach is by irrigation of its cavity with antiseptic solutions. Washing out the stomach, or lavage, is a very old method of relieving the symptoms or indigestion, and does not acquire special apparatus for its performance. All that is necessary is to swallow large quantities of water, or other detergent solution, and then make the stomach empty itself by the act of vomiting. This was in use among the ancient Romans, and probably is among the few therapeutic expedients coming down to us from primeval man. The treatment of dyspepsia by emetics is similar to it, though attended by more nausea and disturbance of the general system. The method, which Kussmaul introduced in 1867, is a great improvement upon either of these. He uses a soft œsophageal tube, attached to a stomach-pump, for the purpose of washing out the stomach, and surprising results are obtainable by adopting this treatment. I have used for the same purpose a long tube, to which a funnel is attached, with equally good results, in adults, the tube being introduced through the œsophagus until its extremity enters the stomach. The funnel is then held upright, and a pint or more of fluid poured through it into the stomach; by simply allowing the funnel to hang down the action is reverse, and the stomach is emptied by siphonage. This is repeated several times at each sitting, or until the water returns clear. This plan answers very well in adults, but the pump or aspirator is better for children. I do not wish to give a bibliography of this subject, but will simply refer to a recent paper (John Hopkins Hospital Bulletin for July, 1890), by my friend Dr. William D. Booker, of Baltimore, in which the results of nearly 200 cases of gastro-intestinal disturbance in children treated by stomach-washing are given. He reports remarkably successful results, especially for the relief of vomiting due to indigestion, and in summer complaint. I could give some interesting cases occurring in my own practice among adults with confirmed dyspepsia (one of incipient insanity, apparently arrested by washing out the stomach a few times and appropriate general treatment), but I do not wish to extend this communication farther.

I would summarize as follows:—

Laborious, painful and imperfect digestion occurring habitually, when not symptomatic of other disease, constitutes dyspepsia; and when accompanied by fermentation of the contents of the stomach and general toxic symptoms, the result of microbian development, it may properly be called infectious dyspepsia.

The disorder is sufficiently prevalent, and gives rise to enough discomfort and actual suffering in its victim not only to deserve our serious consideration, but also to enlist our best therapeutic skill in their behalf. The excessive growth of microörganisms during digestion is favored by slow movements of the stomach and by defective quantity or quality of the gastric juice. Acid dyspepsia, or sour stomach, may be due to excessive secretion of hydrochloric acid (rarely), but is generally caused by lactic, acetic, or butyric fermentation, due to the presence of appropriate forms of bacteria in the stomach. The object of treatment of infections dyspepsia is to prevent the excessive development of microörganisms during the digestion of food. This is sought to be accomplished by (1) the use of articles of diet which are not in a fermenting condition, nor readily fermentable; (2) by adopting such hygienic and tonic measures as will invigorate the bodily powers and especially bring the gastric juice up to its normal standard of quality and quantity, and increase the muscular power of the stomach; and (3) by local antiseptic treatment, including the administration of drugs which retard fermentation, and especially by lavage, or irrigation of the stomach, with weak disinfectant solutions, or simply recently-boiled water.

218 S. Sixteenth Street, Phila.

THE TREATMENT OF ACNE.

BY HENRY WM. BLANC, B.Sc., M.D.,

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When we consider what a common affection is acne, it is rather remarkable that so little attention is given to it by the general practitioner.

If a youth between the ages of thirteen and twenty-five years asks the advice of his family physician about a face broken out with pimples, he is not infrequently given a large amount of advice and a small amount of arsenic, and told that he will soon outgrow the disease, or *outlive* it, at any rate.

If a young girl is afflicted with the trouble she gets similar advice, but the arsenic is now mixed with a little iron, or some emmenagogue; and she, too, is sent on her way to await the predicted disappearance. But does this spontaneous cure come to confirm this advice?

In a few instances I have seen involution take place in about two or three years, leaving the skin red, rough and irritable; but in a large majority of cases the eruption remains as a constant annoyance and disfigurement to its unfortunate possessor, until its latent cause has become sufficiently aggravated to demand for itself, as a separate disease, a special form of treatment, when both affections improve together—the effect together with the cause.

Though acne is never severe enough to threaten life, nor even to produce pain to any marked extent, its common location upon the face is apt to be a source of great annoyance and embarassment to the patient, not only from the redness and prominence of the pustules, but because of the pitting of the skin which not infrequently follows these when the disease remains long untreated.

Acne may be due to a variety of causes, but the commonest of these is indigestion. This word must be taken in its broadest sense as implying impeded function of some portion of the gastro-intestinal canal. It behooves the physician, then, who would treat this affection successfully, not only to search out the causes of indigestion directly located in the alimentary canal, but also to thoroughly inform himself of the condition of the liver, the blood and the reproductive organs, inasmuch as the function of the stomach and bowels may be directly impeded by poverty of the blood or torpidity of the liver, on the one hand, and, in a reflex way, by dysmenorrhœa, or irritation of the external genitals, on the other.

It has become my habit to lay down rigid rules of diet for acne patients, which must be strictly adhered to even in the mildest cases. These rules are framed with a view to increasing the alkalinity of the blood, and promoting daily evacuations of the bowels. A vegetable and fruit diet is recommended in some cases, meat being altogether interdicted, and in others a small quantity being allowed only once a day. Green vegetables should not be dressed with vinegar or mustard, and all salads and pickles are forbidden. Milk, and the alkaline mineral waters may be drunk at or between meals, but tea, coffee and other stimulants must not be taken. In case of weakness an occasional whisky toddy may be taken before meals; though it is not recommended. Nothing is to be eaten between meals, and nothing to be eaten just before retiring. It is needless to say that rich pastry, and other food containing fatty substances, nuts, etc., are not to be partaken of.

These rules will apply in nine cases out of ten. But occasionally we meet with people who cannot drink milk, or with whom fruit does more harm than good. Of course, a special diet must be planned for these particular cases.

The bowels must be made to move daily. To accomplish this an orange or an apple taken an hour before breakfast, or the juice of a lemon mixed with a small quantity of water, will frequently be all that is necessary. But sometimes the habit of constipation is so strong that it requires something more active than the fruit acids to bring about the desired result. If the patient is weak and anæmic, or if the skin has a waxy look, and the sebaceous openings are relaxed (patulous) and inclined to form numerous commedones, it is well to give some remedy which would be a tonic to the system and at the same time have a laxative effect upon the bowels. I do not know of anything which will produce these two results better than the magnesium cum ferro mixture, which may be ordered as follows:

℞—Magnesii sulphatis, ℥j;
Ferri sulphatis, gr. iij;
Acidi sulphuric. dil., ℥j;
Acquæ cinnamomi, ℥vj. M.
S.—Tablespoonful in a little water two hours before breakfast.

The dose here given is usually enough to produce one action a day, but should it be insufficient another tablespoonful may be taken at bedtime.

Sometimes the iron is not indicated, or it may be more desirable to give a medicine which can be made up in pill form. For this purpose nothing is better than cascara sagrada. This is frequently administered as a fluid extract, but its disagreeable taste is against it as a medicine for constant use, and consequently I have fallen out of the habit of using it in solution, giving instead the following pill:

℞—Ext. cascaræ sagradæ, ℥ss;
Ext. hyosciami, gr. iv. M.
Ft. pil. No. 20.
Sig.—One pill morning and evening.

This pill may be taken before or after meals, as the patient finds it most convenient, and serves the purpose of giving tone to the bowels, so that when stopped after two or three weeks of use the constipation which usually attends the stoppage of laxative medicines, is not apt to occur. The hyosciamus is added to this pill in order to prevent griping, but I have acquired the habit of prescribing it always with the cascara pill, for I believe it has a special action of its own in other forms of skin disease, such as erythema (urticaria) when attended by constipation, and in which I have given it with marked success.

The bowels being regulated, what are we to give as a tonic for the general condition of the system? Cod liver oil and iron are apt to be the first agents suggested to our minds, but if these are not given in their most digestible form it is best not to give them at all. Both of these are apt to upset the stomach, and in acne gastric digestion must be carefully guarded all the way through. Indispensable as cod liver oil is in many strumous cases, I think it can be dispensed

with by the majority of acne patients. If iron is to be used it should be in exceedingly small quantity—and as it is to be administered for some weeks, we can afford to give it in small doses—and I do not know of any preparations better than the phosphorus compounds. A number of these preparations now on the market have given very good results as stimulants to the mucous membrane of the stomach and as aids to digestion. They differ chiefly in the relative quantity of iron, quinine or strychnine which they contain. Horsford's Acid Phosphate is a tonic which has given me satisfaction when I knew that the stomach was at fault, and may be given in doses of a dessert-spoonful just before meals in a small quantity of water, and again just before the patient goes to bed. This is sometimes made into a lemonade with sugar, but I prefer to have it taken without being sweetened.

A valuable remedy in acne, particularly the pustular variety, is the sulphide of calcium. This is given in pill form, or as tablets in doses of one-tenth to one-fourth of a grain repeated every two hours. As nearly all druggists keep tablets or gelatine-coated pills of this drug, the patient may be instructed to procure these and carry them about in his pocket, taking them at intervals until six or seven are taken in a day. Not infrequently this drug acts like a charm and the formation of pustules rapidly diminishes under its administration, while at other times the action of the remedy is entirely negative. This negative action may be explained in many cases by the proneness of the drug to become stale, the *sulphate* having formed by oxidation, when, of course, the pills may be expected to be inert. It is probable, also, that to the impurity of the drug may be attributed the digestive disturbances it occasionally produces, for if this were not so it would be impossible to account for the fact that many persons with delicate stomachs can take the sulphide of calcium for weeks at a time.

The forms of acne due to disorder of menstrual flow, masturbation, and the like, are to be treated internally exactly as these troubles are usually treated when uncomplicated with this disease, and we will not pause here to consider methods familiar to every general practitioner. However, a word or two in reference to this subject may not be out of order. With acne that comes upon women arriving at the climacteric there is almost always an accompanying rosacea due to the same cause. This rosacea, as is well known, consists of a redness of the nose and frequently of the cheeks, forehead and chin, the result of dilatation of the superficial capillaries. These patients blush easily, and the skin becomes particularly red and irritable at the time the menstrual flow is to come on. The common complications of "heart-burn" and palpitation in cases of this sort, has suggested remedies which regulate the circulation, contract blood-vessels, and act as general stimulants; and when these are used the results are apt to prove satisfactory.

Apropos of acne due to masturbation, I have a patient at this moment—an octoroon boy, nineteen years old, who has been under my observation, off and on, for a year, and always gets relief from my treatment when he discontinues the sexual irritation. When first seen by me he was a masturbator, and on being told of its injurious effects he stopped the practice for a while, and greatly improved under local and constitutional treatment. Thinking himself cured, and being told by his companions that continence was injurious to a man's health, he plunged into another form of sexual excess—with women, and the acne came back on him in as bad a state as before. Several times he has reformed, and each time he has improved, during the past six months. Latterly I have ceased to treat him with drugs altogether, and am awaiting the result of a newly-formed resolution to discontinue bad habits.

For the external treatment of acne a variety of lotions and ointments have been suggested, though I propose to mention here only some of those that have proven satisfactory in my own hands. But before rehearsing any of these remedies too much stress cannot be laid upon the necessity for opening at regular intervals the commedones and pustules that constitute the disease. For this purpose the acne lancet and commedo-compressor are used. This process requires time and patience, for the patulous orifice of the commedo, as well as the pustular apex of the advanced lesion alike require the use of the lancet. Many patients have been led to believe, from one source or another, that the lesions are aggravated and that pitting is produced by the use of the lancet. Their minds should be disabused of this at the beginning of treatment, and the assurance given that if these lesions are left alone the chances of permanent disfigurement are much greater. For external use sulphur has given me better results than any other agent that I have applied to the face. This may be made into an astringent wash, and is particularly useful in acne rosacea, where the blood-vessels are dilated and the surface irritable. The best of all the washes known to me is the well known *lotio alba*, of which the following is the formula, slighly modified:

℞—Potassii sulphidi,
Zinci oxidi,
Zinci sulphatis, āā ℥ij;
Glycerinæ, ℥ii;
Aquæ rosæ, q. s. ad. ℥iv. M

S.—Apply to skin after having thoroughly removed oily secretion.

The sensation which this produces is a puckering of the skin, accompanied by a feeling of dryness. Patients have complained to me that it made their skin feel wrinkled. The condition which accompanies these sensations is desirable,

but I find it better to alternate this action with a salve which acts more directly upon the horny layer, and which can be rubbed down into the commedones and open pustules. For this purpose I have devised the following combination, which is to be applied morning and evening after having thoroughly washed the face with hot water and the alcoholic soap lotion:[1]

℞—Sulphuris præcip., ʒiss;
Acidi salicylici, ℈j;
Ext. ergotæ fluidi, ʒij;
Lanolini, q. s. ad. ℥j. M.

This prescription I use constantly, and have found it serviceable in all affections involving the sebaceous glands. The sulphur is here rendered more antiseptic by the salicylic acid which, in turn, softens the horny layer of the skin, thus permitting a freer action of the application. The ergot, besides acting locally upon the dilated capillaries causing them to contract, also from its fluid character, aids the lanolin in its penetrating powers. It being understood that the external treatment of acne is the treatment of sebaceous glands the function of which is disordered.

More severe than the method just recommended is Unna's ichthyol treatment. This substance (usually the sulpho-ichthyolate of ammonium) is dark brown in color with a pitch-like consistence, and has a strong penetrating odor, more or less disagreeable to the majority of patients. It is usually too stimulating to the skin in ointments of over fifty per cent., but combined with vaseline, in the proportion 30 per cent. of ichthyol and 4 per cent. salicylic acid, it may be expected to give good results in acne, provided that the pustules are opened in the usual way, and the proper remedies exhibited for the purpose of removing any ascertainable exciting cause. One of the worst cases of acne that I have ever treated was cured with the following ichthyol salve:

℞—Ichthyol, ʒvj;
Acid. salicylic, ℈ij.
Vaselini, q. s. ad. ℥ij. M.
S.—Apply to face night and morning.

In conclusion, it would be well to say a few words with reference to the care of the skin during the course of treatment, bearing in mind that acne is not cured either in a week or a month—usually several months elapse before the patient can be discharged cured—and sometimes a few cases, with obscure constitutional symptoms, will hang on till the beginning of another year. I once cured a case of acne of two years' standing in the short space of ten days, and the delight of my patient was only exceeded by the surprise of her adviser when he saw the result. This rapid cure has been a puzzle to me ever since. But we were referring to the care of the skin during the usually prolonged period of treatment. This consists in keeping it free from all external irritants, such as the soot and dust of the atmosphere, and in constant washings, to be followed by frictions with a hard towel.

It is well to use some bland soap for washing, with a view to removing the oily secretion of the sebaceous glands, so abundant in this disease, and at the same time freeing the glands of a secretion which, by decomposing at their orifices, might excite them to inflammation. A good lotion, which will subserve this purpose, and which may be used by busy persons whose occupations will not permit them to use disfiguring applications on the face during their hours of work, is the following evaporating wash:

℞—Acid. boracic, ʒij.
Glycerinæ, ʒij.
Spt. vini, ʒj.
Ether sulphuric., q. s. ad. ʒiij. M.
S.—Apply to face during the day.

This may be allowed to dry upon the skin and left there without attracting attention.

If asked to sum up in a few words the proper plan of treatment for acne, I should be inclined to say that it consisted in *strong and constant antisepsis* WITHOUT, *and the correction of disordered function* WITHIN.

42 Baronne Street.

[1] This soap, called by Hebra the *spiritus saponis kalinus*, is made as follows: ℞—Saponis viridis, ℥iv· alcoholis diluti, ℥ij. M. cola et adde spiritus lavandulæ, ℥j.; M. et ft. lotio. If too strong it may be mixed with water.

ADMINISTRATION OF MORPHINE BY THE NOSTRILS.

Delivered before the American Rhinological Association, Louisville, Ky., October, 1890.

BY CARL H. VON KLEIN, A.M., M.D.,
OF DAYTON, OHIO.

In the administration of morphine by the mouth, there is generally, besides an inprecipitate taste, a great deal of hacking and spitting; in many to such an extent that it produces an irritation of the throat, especially of the soft palate. If used repeatedly it excites the same irritation of the lips and tongue as in the use of opium, and has been known to blister the mouth. In persons not accustomed to the taste of morphia it produces nausea and vomiting.

Dr. Billroth[1] reports in the case of a lady who took small doses 0.007 gram (gr. 1-9), and even 0.003 gram (gr. 1-22), saw such anxiety, nausea, and vomiting, that although suffering intense pain, she refused to take the remedy again. Cases of the same nature have been reported by Laborde.

Wernick[2] has called attention to the occurrence of a paræsthesia of taste after the use of morphia.

As a rule where persons are found to dislike the taste of morphia, or where it is desired to have a rapid physiological action, the hyperdemic is

[1] Wiener Med. Wochenschr., 1868, p. 763.
[2] Archiv. f. Psychiatrie, Bd. ii, p. 174.

resorted to; this, too, finds opposition on account of puncturing the skin and the danger of producing abscess.

The new method of administering morphia through the mucous membrane of the nose which I will now describe, has been thoroughly tested by me in over one hundred cases where the immediate physiological action of morphia was necessary. I have found it to be the most reliable, tasteless and prompt action than given by the mouth or hyperdemic. It requires much smaller doses than taken by the mouth, and no larger than when taken hyperdemically.

The manner of administering morphia through the olefactory canal is simply by snuffing it up the nasal chambers in the same manner and in the same way as snuff tobacco is used. You divide the dose intended in two equal parts, each part placed upon the end of the thumb and snuffed up into the nostrils. The membrane being very soft and delicate it instantly appears to absorb. I have tried it on myself on several occasions, and it seemed almost instantaneous absorption; no more than fifteen seconds after the introduction I have blown my nose and nothing could be found in the secretion. However, in poor qualities of morphia the drug will not absorb as readily.

In cases where the nasal chambers are incrustated and covered by dry secretion, the cavities should be cleansed before administering; care should be taken not to snuff up too strong to engulf in the throat. If the drug is of a poor quality it will produce sneezing, but the narcotic effect will be the same.

The administration I have now described you will find, besides the tasteless and rapid action, to retain the narcotic effect for a longer period than taken by either mouth or hyperdemic.

NERVE DEGENERATION IN CHRONIC ARSENIC, LEAD, AND ALCOHOLIC POISONING.

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The whole question of neuritis and nerve degeneration is one of very great importance; and all cases that throw light upon it are of value. The three following examples are of considerable interest in this respect. The first case, the detailed account of which was read before the Ontario Medical Association in 1887, is now given in a very condensed form.

The patient, a consumptive, had been taking large doses, m. 20 and 30, three times a day for a lengthy period, of liquor arsenicalis. She had been advised to do this by some one as a cure for consumption. She continued the use of the drug, in spite of much gastro-intestinal irritation, and headache. At last severe pains began in the legs. These pains extended to other parts of the body, and were very intense. At this stage I saw her. There was evidence of neuritis. There was also paralysis of some muscular groups, particularly anterior tibial, permitting toe drop. Tested by galvanic and faradic currents, there was marked degenerative reaction. On the death of the patient the nerves and muscles in the most affected parts were submitted to examination. The degeneration in the nerves was pronounced in its nature; and there was an advanced state of muscular atrophic degeneration as well.

The other case was that of a man about 45 years of age, who had been employed in a lead works for many years. His principal work in the establishment was to run shot. In this work, large quantities of lead were melted and tempered, for the making of shot, by having a certain proportion of arsenic added when the lead was molten. As the arsenic was being added there would arise a volume of fumes; and this, of course, was inhaled freely. The person in question several times had lead colic. He suffered greatly with neuralgic pains in different parts of the body; but especially in the right side of the chest. These pains were no doubt due to neuritis. He had drop wrist. Finally, he died rather suddenly in the condition of acute imbecility and general paresis. The nerves and muscles of the most implicated regions were examined and found to have undergone a most extensive amount of degeneration. In the extensors of the forearm muscle fibre could hardly be recognized in some parts; while the nerves in some places were completely destroyed, in others only in a state of inflammation. There were the reactions of degeneration to the usual electric tests.

The third case is one of alcoholic neuritis. The patient was a well developed man, 39 years of age. He had been a very free beer drinker all his life. Latterly, he kept a hotel, and was in attendance at the bar nearly all the time; and constantly taking "nips" with those who were drinking. He began to complain of pains in his legs, anterior tibio-fibular region, which he thought were rheumatic. There was also some failure of eye-sight. I told him his trouble arose from his drinking and insisted upon abstinence from liquors of all kinds. This led to a change of physician for a time. He grew worse. Toe drop set in. Eyesight became more and more impaired. When I saw him again there were marked evidences of muscular atrophy and degeneration. He died in an attack of delirium tremens. In this case there was a combined condition of inflammation and degeneration of the nerves. The musculo-cutaneous and anterior tibial nerves were in an extreme state of degeneration. The musculo-spiral was also much affected.

The muscles supplied by these nerves were greatly wasted and essentially atrophied. Prior to death there were abundant evidences of degeneration by the electric examination of the affected regions.

THE CLINIC.

MYOMATA UTERI, AND SUPRA-VAGINAL HYSTERECTOMY.

A Clinical Lecture delivered in the Medico-Chirurgical Hospital, Philadelphia.

BY E. E. MONTGOMERY, M.D.,
OF PHILADELPHIA.

Through the kindness of Dr. J. Bart. Webster, of Atlantic City, an alumnus of this college, it is my privilege to bring before you a patient with the following history:

Clara ——, æt. 38 years, colored, was admitted to the hospital two days ago, suffering from abdominal distension. She had noticed an enlargement some four years ago, which has gradually increased since, until now it is a very serious burden. Her principal distress is from the weight and pressure. The growth has not been attended by any marked disturbance of the menstrual function. The general appearance of the patient is good, showing that her nutritive functions have not been influenced.

Inspecting the abdomen when the muscles are relaxed by ether, we see the distension is nodular and irregular. A large mass can be seen upon either side, the larger to the right. Palpation discloses that these nodules are hard and firm, while the whole mass is freely movable. By previous vaginal examination, a mass or nodule was found in the pelvis behind the uterus. The uterus is involved in the growth and cannot be separated from it. Without further examination, the majority of you are ready to pronounce it a case of uterine myomata. The hard firm growth, its association with, or involvement of the uterus, the absence of fluctuation, and the slow progress all confirm the diagnosis made.

These growths are made up of tissue analogous to that of the uterus, and have their origin in localized spots within its walls. Where the muscular tissue predominates, the tumor is soft, its growth rapid, and the line of demarkation ill defined. Usually, as a tumor increases in size, the connective tissue about becomes thickened, forming its capsule. These tumors may early become encapsulated and their growth arrested, after which enucleation is comparatively easy. They may exist singly, or the uterus may contain a large number, in the latter, the condition is known as multiple myomata. To the latter class belongs the case now under consideration.

It may be well to remember that these growths are also designated according to their relative position in the uterus. All these growths originate in the walls of the organ, and as they increase in size, those nearest the mucous membrane are forced into the cavity, becoming what is known as submucous tumors, when such a tumor is attached by a large base we call it a sessile tumor, when by a small one, a polypus. The latter tumors may be extruded from the uterus and hang by a long pedicle.

If the growth is situated in the wall of the organ, equally distant from the peritoneal and mucous surfaces, it is designated an interstitial, or mural tumor; while a tumor extruded beneath the peritoneum is called a subperitoneal. To the latter class belongs the tumor we have under consideration.

These tumors vary in size from that of a pea to those weighing 80 and 100 pounds.

The symptoms of the disease, will depend much upon the size, and the situation of the growth. The intra-uterine and submucous, and those interstitial which project well into the cavity of the organ are likely to be accompanied by hæmorrhage and uterine colic. In every case of continuous or repeated hæmorrhage, occurring in women, during the peroid of active menstrual life, you should examine carefully to determine the presence of polypus, or submucous tumor. In the subperitoneal variety, hæmorrhage may be slight, or entirely absent. The principal symptoms in such case will arise from pressure. The influence of the tumor will depend upon its situation; thus a small tumor low down in the pelvis may cause much more suffering than a much larger one situated in the abdominal cavity. The period of active growth is during the menstrual life of the individual. Subsequent to menopause, the growth either remains quiescent, or diminishes in size.

In considering the operative treatment of a patient, near the climacteric, it is well to remember that the latter is usually delayed, owing to the turgescence of the organ produced by the presence of the growth.

What shall be our treatment in the case before us? We have the choice of medical, electrical, and surgical.

Medical Treatment.—A great variety of remedies have been lauded for their imagined efficacy in delaying the growth, or causing the absorption of these growths; but in estimating the value of any plan of treatment, it should be known that their progress is often capricious, the tumor decreasing or disappearing without any assignable cause.

The remedies which have been found the most effective, are the bromides, the ammonium chloride, calcium chloride, and the various oxytocics. The first named drugs have been given quite largely, but it must be confessed with doubtful

utility. The calcium chloride was recommended by Sir Jas. Y. Simpson, because of its power to produce calcareous deposits in the vessels and capsule of the tumor, but unfortunately its action could not be limited to the growth; the coats of the large vessels and valves of the heart were also affected. The most effective remedy, undoubtedly, is ergot. It may be given by the mouth, by the rectum, or hypodermically. The drug exerts its action in two ways; first, through its action upon the muscular coats of the arteries, second, by intensifying the contraction of the uterine fibre, thus favoring the pedunculation of the tumor, either beneath the peritoneum, or into the cavity of the uterus. In order that this treatment should be effective, there must still remain enough healthy muscular fibre to be stimulated, and so arranged as to exert its force upon the tumor. The number of tumors in this case leads me to fear that it would not be effective. Another, and more important objection to its use in this case is the element of time. The most that we could accomplish would be a slight reduction in the size of the growth, and treatment would need to be continued an indefinite time.

Electrical Treatment.—The observations of Apostoli, based upon accurate dosage of electricity and its judicious application, have demonstrated its marked beneficial effect. His observations have been confirmed by such careful and experienced men as Sir Spencer Wells and Mr. Keith. In cases of hæmorrhage, the application of the positive pole intra-uterine is very effective in controlling and arresting it.

You will ask why we do not use electricity in this case? I reply, for the reason that it would require some months of treatment before this patient would obtain much decrease in size; time which she can not afford, hence we are driven to resort to surgical measures.

Surgical Treatment.—Now we may have our choice of two procedures under this head, viz.: the removal of the appendages, or the supra-vaginal removal of the uterus. The first operation would be done with the purpose of establishing menopause artificially. We do not consider this operation serviceable here for several reasons: first, the removal of the appendages does not always bring about, at once, a cessation of menstruation; second, the tumor would still be left, and cause distress by its weight and pressure; third, the operation, in many cases, is more difficult than the removal of the tumor, and in some, from being spread out over the mass, can not be accomplished. We shall proceed, then, to the operation known as supra-vaginal hysterectomy.

As a preparation for the operation, we have the patient's bowels thoroughly evacuated by repeated doses of saline, the abdomen carefully washed with soap and water, and afterward with acid sublimate solution, devoting especial attention to the pubes and pit of the umbilicus. Having etherized the patient, we expose the abdomen and cover the body above and below with blankets, the exposed surface is surrounded with towels wrung out of an antiseptic solution. An incision is made in the median line, using probe-pointed scissors to complete the incision through the fascia and peritoneum. The incision extended from the umbilicus to within an inch of the pubis. The tumor was with some difficulty lifted up, and was held closely to the brim of the pelvis by the contracted broad ligaments. This formed so broad a stump that its ligation was not feasible. The finger was pushed through the base of one broad ligament close to the uterus, two large forceps applied to the ligament, which was cut between them. After the opposite ligament was treated in the same way the remainder of the uterus was surrounded with an elastic ligature and the tumor cut away. The broad ligaments were ligated with braided silk. The stump was transfixed with pins and a wire *serre nœud* applied, after which the elastic ligature was removed. The abdominal cavity was cleaned, the stump pressed down in the lower angle of the wound and the peritoneum stitched about it with catgut sutures. The entire wound was closed with chromatized catgut sutures. The dressing of the wound, after dusting with iodoform, was iodoform gauze and absorbent cotton. The stump was carefully isolated in dressing the wound. The duration of the operation from the entrance to the exit of the patient was one hour.

The patient will be placed in a warmed bed and surrounded with hot bottles to prevent shock. Neither food nor drink will be given by the mouth for the first few days. If she complains of thirst we will inject slowly into the bowel from one half to a pint of warm water. Nourishment will be given in the same manner. If she complains of severe pain, morphine will be given hypodermically, but we will endeavor to limit her to the one dose, as this drug, by locking up the secretions, limits the power of eliminating poisonous compounds, promoting the probability of septicæmia. Should there be any elevation of temperature, we will, at once, begin the administration of a saline, thus forcing the intestines to drain the peritoneum.

MEDICAL PROGRESS.

EXPERIMENTAL TUBERCULOSIS.—GRANCHER and MARTIN (*Le Bulletin Médical*), on November 19, 1889, deposited in the Academy of Medicine, Paris, a sealed paper, in which they claimed, by a mode of treatment, to have succeeded in preventing the evolution of experimental tuberculosis in the rabbit. The publicity given by Koch

of his results, has led them to publish their researches sooner than they wished. In their experiments they chose rabbits and injected the bacilli into the veins, as by this means constant lesions of the liver, spleen and lungs are produced, lesions which invariably prove refractory to local treatment. As the tuberculosis thus conferred is always fatal, we have a means of measuring the value of any method tending to confer immunity or to cure after infection.

They have always followed a uniform plan, a like quantity of a virulent culture of the tubercle bacilli being injected into the veins of two rabbits, the one to serve as a control animal—the weight of each animal being taken daily to guide in the application of the treatment. In the past two years they have experimented upon 42 rabbits, of whom 15 were control animals and 27 were treated in different series. The results generally conformed to the following series: December 31, 1889, seven rabbits received in the vein of the ear a like quantity of a virulent culture. The control animal died twenty-three days after inoculation; the rabbits treated lived 126, 176, 176, 184, 189 days respectively; the sixth one is still living 229 days after inoculation. Autopsy in these cases was almost negative, spleen small, liver healthy and free from bacilli; but in the perilobular spaces a few embryonal cells were found, showing a tubercular process in the healing stage.

They have obtained a diminution of the virulence of the bacilli by successive cultivations. The first of these series kills the rabbit, when injected intravenously, in from fifteen to thirty days. From this point the virulence successively diminishes to the tenth, but the last three cultures do not reproduce themselves and are without effect upon rabbits. The second and third are mortal, but after a varying time dependent upon the resistance of the animal. Variations are still more marked with cultures 4, 5 and 6. The first series of inoculations were made on August 27, 1889; five rabbits received in the ear vein one-half a Pravaz syringe full of culture No. 6. September 3 the same rabbits received culture No. 3, and again the same culture on September 12, September 26 culture No. 2, and at last, on October 15, culture 1. At this time three fresh rabbits were inoculated for control experiment. These latter died October 28, November 2, and November 5 respectively, with the classical lesions of experimental tuberculosis. Three of the vaccinated died in the same time and with the same lesions. Two survived until December 17 and January 7, 1890, respectively; they both presented mild tubercular lesions. This demonstrated conclusively the insufficiency of vaccination with the weak cultures 6, 3, 3, and 2. Very good results have been obtained by multiplying the vaccinal cultures and stopping with No. 2. In a series of nine rabbits, with two control animals, inoculated with the deadly culture No 2, January 23, five of these animals are still alive seven months after infection. Immunity is not so conclusively shown in these cases, as the results of inoculation of control animals with culture No. 2 are by no means certain.

A last series was composed of eleven animals vaccinated with cultures 6, 5, 4, 3 and 2, from January 30 to March 25. April 10 the vaccinated rabbits and two control animals received culture No. 1. The controls died twenty-three and thirty days after inoculation. The vaccinated have resisted still more, two dying June 16 and 26, two the 7th and 29th of July, four on the 4th, 7th and 9th of August. Three are still living four months after the most virulent inoculation.

In conclusion the writers think they have succeeded in giving the rabbits a prolonged resistance and in conferring an immunity for an undecided length of time.

THE OPERATIVE TREATMENT OF UTERINE MYOMA.—A. MARTIN closes an elaborate paper on the above subject (*Zeitschrift für Geburtshilfe und Gynakologie*, Band XX, Heft 1, 1890), with the following deductions:

1. Enucleation *per vaginam* should be confined to those cases in which there is a limited distension and beginning extrusion of the growth.

2. When a multinodular condition of the uterus exists, the organ still being movable in the pelvis, the size of the growth and that of the vagina corresponding, *extirpatio uteri vaginalis* is to be recommended in cases requiring operative interference.

3. In the case of large tumors which must be removed by laparotomy, enucleation should first be considered. In all instances where it is possible it is the duty of the surgeon to leave the ovaries, tubes, and as large a portion of the uterus as may be, for carrying on the female functions.

4. When it is not possible to save the uterus, total extirpation together with removal of the tumor by abdominal section is advisable, instead of partial removal—thereby doing away with all future discussion as to the intra- or extra-peritoneal treatment of the pedicle.

CHOLERA INFANTUM.—Many observations have been made with the aim of discovering a pathogenic organism in cholera infantum. Henoch came to the conclusion that we must at present regard the origin of this disease from microörganisms as merely a hypothesis. BAGINSKY (*Centralblatt für Klinische Medicin*, 1890, No. 36) has also made investigations which have led him to conclude that there is no specific organism which produces the disease. He states, however, that he found several varieties of microörganisms, which in his opinion together were the chief etiological factors. Jaksch states that the green

color so often seen in severe forms of this disease is due to the presence of a bacillus. Baginsky, in his paper referred to above, gives a very good account of the symptoms, sequelæ, and treatment of cholera infantum. He lays great stress on a peculiar eruption which often appears. It takes the form of roseola-like spots, which are found sometimes spread over the whole body, and sometimes only on the extremities. They disappear after about two days without desquamation, and are of no prognostic importance. Occasionally another form of exanthem is noticed, which may be regarded as an erythema. This also quickly disappears without unfavorable symptoms being foreshadowed by it. Amongst the sequelæ of cholera infantum Baginsky draws special attention to a condition which may be compared to that which occurs in Asiatic cholera, which this author designates "cholera typhoid." It is characterized by the following symptoms. The child becomes sleepy and apathetic; the temperature is high; there is great thirst; the stools are loose and contain pus and mucus in various proportions, and fibrinous threads are occasionally present. Pulmonary complications often supervene, such as bronchitis or broncho-pneumonia; pyæmic abscesses break out; the urine contains albumen, or there may be complete retention. The child lies with half-open eyes, and xerosis of the cornea often results. As regards treatment, the same author advises calomel, resorcin, and naphthalin, together with antiseptics, in the lighter cases; at the commencement of an attack, if the child be strong and well nourished, it is well to wash out the stomach. It is also important to place the little patient on the lowest diet possible, or even to withhold food altogether for a few hours. The latter precaution applies not only to artificial feeding but also the mother's milk. On the other hand, during this period it is advisable to administer brandy, sherry, tea, or coffee in iced water, and, if exhaustion be very pronounced, subcutaneous injections of ether. Gradually the child must be given weak gruel, milk thinned with iced water, etc. If complications occur, the various symptoms must be treated according to the usual methods; and the same remarks apply to sequelæ. Astringents should never be given; they are not only useless, but may even lead to evil results.—*Lancet.*

ACTINOMYCOSIS.—MATLAKOUSKI (*St. Petersburger Medicinische Wochenschrift*) reports a successful operation for removal of this condition in a man 46 years old. Six weeks before coming under observation the patient noticed a small, round, movable tumor under the angle of the jaw, which seemed to come without any special cause. The tumor grew, was not painful, and soon lost its sharp outline, seeming to infiltrate the surrounding tissue. Later a small abscess formed that discharged a small amount of pus. Upon examination the hardened outlines of the infiltrated tissue could be distinctly felt. The tumor was completely extirpated, in the same way as a new growth in the same region would have been removed. Healing took place by granulation, and after two years and a half there was no return of the malady.

DANGER OF ERGOT AFTER PARTURITION.—MME. GACHES-SARRAUTE (*La Semaine Médicale*) in a paper before the French Academy for the Advancement of Science, stated that she would supplement the old rule that ergot should not be given before the child and after-birth had been expelled, by an additional one that ergot should not be given at all. Not even in those cases complicated by severe hæmorrhage. The foundation for these views lies, she thinks, in the fact that the uterus is never completely emptied in parturition—there always remain some shreds of membrane or clots. These according to her view, are a very grave source of infection, and a frequent cause for sub-involution and late infection recognized clinically in the several forms of metritis. Her own practice is to completely empty the uterus in all cases, and to be sure that this has been done she carries the hand into the uterus. The writer recognizes the danger of this practice as ordinarily performed, but says that with a thoroughly aseptic hand, with the nails carefully trimmed to avoid wounding the uterine tissue, it is attended with little risk. On the contrary, if the uterus is thoroughly emptied and washed out with sterilized water, hæmorrhage is immediately arrested and involution is a rapid process occupying but a few days.

She claims for these apparently heroic measures, almost complete freedom from the secondary accidents, now, unfortunately, too common.

CATHARTIC TREATMENT OF PERITONITIS.—LANPHEAR, of Kansas City (*Medical Review*, July 12, 1890) discusses the cathartic treatment of peritonitis and gives the history of a number of cases successfully treated. He claims that opium possesses, really, but little curative power over the inflammatory process; that it retains within the bowels irritating fæcal matter that can but increase the trouble; that by completely checking peristaltic movements it leads to the formation of adhesions; that it stops excretion and so prohibits the elimination of the poisonous products of inflammation; and that by benumbing the sensibility it gives the physician a feeling of (false) security which is undesirable. Upon the contrary, the administration of the saline cathartic has the power of arresting the disease if given in the stage of invasion; here the peritoneum is simply congested, or just taking on an inflammatory action—the pain is not very severe, the

abdomen is not greatly distended, the fever is not high; but the physician it called, recognizes the danger and immediately gives the saline. If it be the initial stage of a simple peritonitis, if it be the beginning of a puerperal peritonitis, or if it be the sthenic stage of a septic peritonitis, the indication for the carthartic is clear; in either instance the blood-vessels are turgid with blood—the circulation impeded; the taking away of a considerable amount of serum from the abdominal viscera must profoundly affect the peritoneal circulation and assist in restoring the normal state. Besides, the active peristaltic action prevents the formation of bands and adhesions if the inflammation goes on; and experience at the bedside demonstrates that as the inflamed surface is relieved from engorgement by the emptying of the intestinal vessels, the temperature and the pulse rapidly decline, while the pain disappears almost as speedily as under opium. If the disease has gone on to the second stage where the fever is high, the pain intense, the tympanites marked and the pulse rapid and wiry, cathartics are not so strongly indicated, though small doses of sulphate of magnesia and tincture of belladonna may often be given with advantage; here the danger is collapse, and as vital force must be conserved, violent purgation is not justifiable and opium must be given—not to check the peristalsis, nor to "put the bowels in splints," but to deaden the pain in the many terminal nerves of the peritoneum, to sustain the heart and prevent shock. The bowel must be kept free from irritating fæcal matter, by enemata if possible, by a good cathartic if necessary; tympanites must be controlled by turpentine, either internally or by stupes; and the strength must be maintained by milk, whisky, etc.

His conclusions are:

1. The saline treatment should be adopted early in simple, acute peritonitis.

2. Small doses of calomel may be given to mild purgation in cases seen after the disease is fully developed.

3. Cases which fail to be relieved by cathartic measures should receive early operative interference.

4. Whenever peritonitis has gone on to that stage where the formation of pus is known, or even suspected, to have taken place, abdominal section and drainage are imperatively indicated.

5. When the existence of tubercular peritonitis is diagnosticated, or strongly suspected, operation (exploratory incision) is justifiable.

6. Opium is only indicated in the second stage of peritonitis, and then not because it "forms a splint" but because it relieves pain, sustains the heart and prevents shock—thus combatting the tendency to death.

A HEAVY BRAIN.—OBERSTEINER (*Centralblatt für Nervenheilkunde und Psychiatrie*) describes the brain of a man 53 years of age who recently died in the poor house of Vienna. The previous history of the individual was fairly well known; born in Vienna of Jewish parents, in excellent circumstances, he wasted a rich heritage and finally died a pauper. The brain weighed 2,190 grams, after making some allowance for some possible post-mortem inhibition, 2,028 grams. The microscopic examination showed no special alteration in the histological structure and the various convolutions had about their normal arrangement.

The author takes this opportunity to make some remarks on the weight of the brain in general. He dismisses as untrue the statements regarding the extraordinary weights assigned to the brains of Cromwell and Lord Byron. The only authentic instance in which a brain has weighed over 2,000 grams he assigns to that of Turgenjeffs, who died in Paris in 1883. The autopsy was made by Broardel, Sêgond, Descond and Magnin, and the brain weighed 2,012 grams. He dismisses as unreliable the observation upon the brain of Rustan, who was found to have a brain weight of 2,222 grams.

Bischoff mentions the brain of a woman that weighed but 820 grams who was apparently not idiotic, but in whom insanity was given as the cause of death. J. Hess examined a brain in Obersteiner's laboratory that weighed but 788 grams. It belonged to a woman 67 years of age who lived in the poorhouse, and who must have manifested sufficient intelligence to have conducted herself properly, and attended to the ordinary affairs of life within the limited range of her experience. The microscopic examination of this interesting specimen showed vacuoles throughout the brain, due probably to old encephalitis.

TREATMENT OF POST PARTUM HÆMORRHAGE.—DIRSKA (*Berliner Klinische Wochenschrift*, No. 8) recommends in post partum hæmorrhage that the uterus be firmly grasped by one hand, while with the other all clots are removed, and walnut-sized pieces of ice be conveyed to the uterine cavity and upper portion of the vagina. It is necessary that the uterus be compressed for at least fifteen minutes. The author has always succeeded in stilling post partum hæmorrhage by this method, and in thirty cases of placenta prævia centralis when it was applied, was so fortunate as to save the lives of all his patients.

POISONING BY BOILED CRAWFISHES.—DRS. ZORIN and MARLEKOFF, of Nikolaiev, report a series of cases of acute gastro-intestinal catarrh recently observed in which the disease had been undoubtedly caused by the ingestion of commercial boiled crawfishes. Some of the cases proved fatal.

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SATURDAY, OCTOBER 25, 1890.

THE FIELD OF OPERATIVE LABOR.

Conservative surgeons were formerly regarded as those whose training and inclination led them to adopt any other probable curative surgical methods in preference to operative procedures, unless the latter were imperatively demanded. They were not ready to suggest the employment of the knife as a radical measure at the very outset, if any other means of relief were attainable. It is a question whether such a description would be applicable to the conservative surgeon of the present day, who with different surroundings of his patient, and with precautions that were not formerly available, feels much more secure in assured results from the use of the knife. It was something creditable, only a few years since, and in the memory of even young practitioners, to be conservative in the treatment of injuries and surgical diseases of the abdomen and the brain; and he who would needlessly, as it was then considered, operate instead of palliating by any other possible or plausible method, would be regarded as a meddler, if not, in some instances, almost a murderer, should the result be unfavorable.

Since the introduction of the various rational aseptic and antiseptic auxiliaries to direct surgical art, and the more favorable prognosis which they assure, he who would fail to employ them or to accept the principles of personal cleanliness upon which they are based, or would hesitate to resort to the use of the knife in cases in which modern advancement has plainly shown its applicability as an almost certain means of relief to suffering, would no longer be considered a conservative surgeon, but as a halting unprogressive and unenthusiastic companion in the ranks of a constantly advancing army of modern practitioners. To open the abdomen, except in extreme cases of necessity, was not long since regarded as almost a barbarity; but happily the limits of operative interference are now being clearly defined by the best surgeons, so that caution and tact are keeping pace with boldness and skilled manipulation. Conservative surgery has, therefore, advanced in its scope and field, being active and aggressive where it was formerly passive and noninterfering; but it exercises its watchful care and supervision over all the accessories which are now regarded as essential to the successful issue of every important, or even trivial, surgical operation.

While, however, the use of the knife has been greatly extended to the relief of injuries and morbid conditions in the highly sensitive and impressible visceral regions, we cannot be blind to the fact that in medical cases such direct radical surgical measures may be resorted to injudiciously, where medical treatment alone is indicated. The favorable reports which are so often made, in medical journals and in the proceedings of medical societies, of the results of operative interference in medical cases, or in those which are semi-surgical in their character, may sometimes mislead the inconsiderate and induce a practitioner who is ready, with open mouth, to swallow any novelty, to treat a case from the standpoint of the surgeon rather than from that of the medical attendant. This is a danger not to be overlooked, and the young practitioner should not be so much dazzled by the brilliancy of such reputed surgical triumphs as to be thrown off his guard in arriving at a decision as to the line of treatment best adapted to the case in hand. There is danger, too, that if some of these severe operations are proven by experience, under aseptic and antiseptic influences, to be but seldom fatal, they may come in time to be looked upon too lightly and to be approached too familiarly by those who may not recognize their difficulties, or who may fail to appreciate the narrowness of the boundary line between success and failure. Thoughtful surgeons everywhere are anxiously contemplating the field of operative labor, with apprehension that it may be invaded by the un-

skilled and the unscientific beyond whose reach the bold and brilliant surgery of the present day occupies a lofty station. All honor to those modern minds and hands that have so ennobled the science and the art!

CARE OF THE INSANE.

In the evolution of organic types we notice a constant reversion to preëxistent forms. So strong is this atavistic tendency that a six-toed ancestor will send through many generations his acquired deformity, and we shall find it appearing again and again even though it skip one or more generations. So in the development of political and social institutions, there is a constant tendency to revert to a primordial type, and the patriot cries out, "Eternal vigilance is the price of liberty."

The humane and scientific care of the insane has been achieved after a struggle extending over one hundred years, in which, more than once, the tide of superstition and ignorance threatened to overwhelm the small but heroic band battling for the rights of these unfortunates. One would suppose that this question had been definitely settled, but now and again the reversion type shows its deformed head. We refer especially to an article read by DR. J. M. DODSON before the Wisconsin State Medical Society. In this paper we have an indictment, strong in that personalities are avoided, against the county care of the insane that has reared itself upon a foundation of false economy, synonymous with neglect. How true this is, is shown by the report of one county receptacle in New York State that proudly boasts of a reduction of the *per capita* costs to $1.06 per week. That such a sum cannot furnish proper food, supervision, care and medical attendance goes without saying.

Dr. Dodson points out the fact that chronicity and incurability are not necessarily convertible terms, and makes a stirring plea for enlightened medical supervision of the chronic insane. He closes with an appeal to the members of the State Society to aid in the erection of State institutions for insane, with separate provision for imbeciles and insane criminals.

THE French parliament contains 42 physicians, only one of whom belongs to the Conservative party. The remainder are either radicals or liberals.

FEMALE PHYSICIANS IN EARLIER TIMES.

In 1596, a license was granted in the city of Norwich, England, to DAME ADRIAN COLMAN, widow, late wife of DR. NICOLAS COLMAN. The license was given this lady to administer to women and children, on the grounds of her having been experienced in the art of physic during the lifetime of the said Nicolas. In 1560, the Bishop's court of Norwich licensed DAME CECILY BALDRYE to practice the art of chirurgery. One hundred years later, a dentist, ROBERT PURLAND, received a permit to practice from the Bishop of the same diocese. This is cited to show the scope of power of the ecclesiastics of those early times. It is not generally known that in the early Middle Ages much of the military surgery of that period fell into the hands of women, who were not unskilled in simple cures. In the old troubadour song about Aucassin and Nicolette, we are told that when the hero got his hurt, Nicolette looked him over and found his arm out of joint and "put it in again." In the feudal times it was the custom to educate the girls, belonging to the nobles, in practical matters pertaining to medicine and surgery, especially the healing of wounds. But by the time of the sixteenth century, the sphere of women, at least in the German army, had fallen off several points, from the dignity of the original treatment of the wounded, to a compound of nurse, camp-follower and something even less desirable, which is best expressed by the title of the official, who had charge of them, namely, "hurenwaibel," or whoresergeant. In camp, the sick and wounded were collected into a special hospital tent and nursed by these ladies. On long marches they were carried along in wagons, or left behind in villages or cities, under the care of a "spittelmeister."

EDITORIAL NOTES.

NEW YORK STATE MEDICAL ASSOCIATION.—The seventh annual session of this Association was held at the Mott Memorial Hall, New York, on October 22, 23 and 24. The occasion was in every way enjoyable, and helpful in sustaining the reputation of this young and vigorous body. There was a discussion on "Intra-Cranial Lesions," and another on points bearing upon "Prophylaxis in the Obstetrical Chamber." Were there no other attractions these would certainly

have repaid an attendance from any portion of the Union, while the other papers upon the programme were of present interest and practical value. This Association is a model organization, divided into Societies and Districts, responsible to the parent State Association, which in turn claims allegiance to the American Medical Association. With this first-named body, the system of delegates has been abandoned, each member immediately upon election becoming endowed with the privilege of representing his own views, and subject only in matters of legislative interest to the will of the majority. All elements of factional discord are thus sought to be eliminated, and so far has resulted in banding together a class of physicians who only needed a stimulus for the best of work.

CHOLERA INTELLIGENCE.—According to official returns from Spain, 1,814 fresh cases of cholera and 959 deaths occurred during the month of September, thus bringing the totals since the beginning of the epidemic up to 4,870 attacks with 2,516 deaths. There is but little fresh news as to the distribution of the disease in the Peninsula, but it is evident that the city of Valencia is still most severely attacked. At Massowah the epidemic is decreasing; indeed, on the 29th of last month it was regarded as having ceased. No fresh intelligence comes from Aleppo, but quarantine restrictions are maintained and renewed against arrivals from the Gulf of Alexandretta. From a report made to the Russian Government by a physician entrusted with a special mission to Persia, it would appear that cholera is tending to recede from the southern boundary of Russia, such extension as is taking place in that part of Asia being in the direction of Mesopotamia; and it is predicted that its movement is *via* Van and Bitlis to Mosul and Bagdad. Two rumors of cholera in England, one in the Port of Liverpool and one in the St. George's sanitary district, near Bristol, both turned out on inquiry to be mere attacks of so-called English cholera.

THE report of the Pennsylvania State Board of Health as to the number of registered medical practitioners in that State has just been issued. There are 8,318 practitioners, of whom 641 are of foreign birth, every nation, with the exception of Spain, being represented. The report contains the names and residences of each practitioner, with the name of the college from which he graduated and the length of time he has been practicing.

IN MEMORIAM.—Resolutions on the death of Dr. T. B. Harvey, of Indianapolis:

The members of the Mississippi Valley Medical Association now assembled in Louisville, Ky., desire to extend to the bereaved family of our beloved Vice-President, Dr. T. B. Harvey, our heartfelt sympathy.

In his untimely death this Association has sustained an irreparable loss. Dr. Harvey was beloved by each and every member of this Association, in whose interest he labored with such untiring energy. A brother to the older and father to the younger members of his chosen profession, we can but think of him with tearful eyes and aching hearts.

And while we thus mourn the loss of this noble man, we sincerely sympathize with the grief stricken members of his family, and although knowing full well that no words from us can lessen their deep sorrow, we send them this message of condolence and sympathy.

Resolutions on the late Ex-President of the Mississippi Valley Medical Association, Dr. William H. Byford, of Chicago:

We, the members of the Mississippi Valley Medical Association, now assembled at Louisville, Ky., desire to extend our heartfelt sympathy to the bereaved family of our late Ex-President, Dr. Wm. H. Byford, who has, since our last meeting, been removed from our midst.

We desire to convey to his family expressions we feel at this grand man's untimely death. There has been taken from us a noble man to whom a worthy successor will not soon be found. This Association especially has lost a kind and good friend and brother, and we join with all others of our profession in mourning his untimely death.

F. C. WOODBURN, M.D.,
WM. PORTER, M.D.,
DUDLEY REYNOLDS, M.D.

October 9, 1890.

THE GROWTH OF HARMONY BETWEEN MEDICINE AND PHARMACY.—The *Western Druggist* has the following editorial comment on the desideratum of closer relations between physicians and pharmacists: "Now that the American Medical Association has established a department of pharmacy, it is probable that more intimate relations will soon be established between the various State Pharmaceutical and Medical Associations. As soon as this is accomplished a new field will be opened up for work of mutual value to both physicians and pharmacists. A number of the pharmacal associations have sent delegates to the medical conventions, and in a few instances the physicians have been represented at pharmacal

meetings. Members who are both physicians and pharmacists and feel a sympathy for both professions are in a position to make serviceable delegates and should be selected on that account." The incentives to harmony between these two honorable scientific callings are constantly increasing, for the standards in both are being constantly carried higher. There are men in both professions—whose minds are so thoroughly infused with the scientific spirit of the period—that they can meet as peers, no matter where or what the platform is on which they meet. Science is the leveller of minor distinctions as between individuals, and the time will doubtless come, if it has not already come, when cordial and comfortable delegate-relations may be realized between the bodies to which those individuals belong. Breadth of views and honest work must open many doors that have hitherto seemed to be closed, and yet as the good work of harmony goes on, the specialization of scientific work of the two professions must also go on; so that while on the one hand they are drawn together, on the other hand the enormously increasing demands upon each will tend to keep them in their own special spheres.

DR. MONTROSE ANDERSON PALLEN, died in New York City, October 1, after a brief illness. He was the son of a physician and was born in Vicksburg, Miss., in 1836. He was graduated from the Academical Department of the University of the City of New York in 1853, and from its Medical Department in 1856. After studying in London, Paris, and Berlin hospitals, he began the practice of medicine in St. Louis. During the war he was a medical director in the Confederate Army, from which he was sent to Paris in 1864 to obtain medical and surgical supplies. Soon after his return he was captured, and he was held in New York on his parole till the end of the war. Dr. Pallen was appointed Professor of Gynecology in the New York University in 1874, and he held the position until his death.

OFFICIAL REPORT ON THE FIRST ELECTRICAL EXECUTION.—Dr. Carlos F. Macdonald, the State Commissioner in Lunacy, of New York, has made an official report to the Governor, in which he expresses a favorable view regarding the use of electricity as the capital punishment in the case of Kemmler. He holds that the first contact was fatal and that the death was painless. In future executions, however, he would suggest certain changes in the apparatus. He would have the law so amended as to provide one single central execution plant, equipped with a specially designed dynamo capable of generating a 3,000-volt current, and that instruments for measuring the current be placed in the death-chamber and properly managed by capable men. Dr. Macdonald states that the efforts of interested parties to invest Kemmler's execution with "an air of repulsion, brutality and horror" will fail of their object and that, when all the facts in the case are rightly understood, there will be no doubt in unprejudiced minds that the first execution was a successful initiation of the new means of capital punishment.

MURDER OF AN ASYLUM PHYSICIAN.—Dr. George W. Lloyd, an assistant superintendent at the King's County Insane Asylum, Flatbush, New York, was shot and killed almost instantly, October 10, by an escaped lunatic, who had been at large some months and who had returned to the asylum, armed with two pistols, with the avowed purpose of murdering as many as possible of the officials who had been concerned in his former detention. He had no special antipathy against the slain physician, less in fact than against two or more others, but meeting Dr. Lloyd first, he shot him and sought to escape, without carrying out further his murderous designs. Dr. Lloyd was an able and promising young physician, whose early cutting off is peculiarly tragical and painful, and none the less so, if it be true, as is alleged, that the authorities did not exercise due vigilance in following up their escaped charges and were content to report the facts of the escapes, and to enter them up on their records as patients discharged. This sad event may prove a salutary lesson to our alienists in regard to the escape of dangerous inmates from their asylums.

THE percentage of graduates among the physicians in Illinois was only 48 per cent. before the registration law went into effect; now it is 91 per cent.

DR. WALTER RIVINGTON says that to improve the medical profession in Great Britain, it is necessary to diminish the overcrowding, and the too free use of alcohol.

TOPICS OF THE WEEK.

TIMELY PRECAUTIONS.

The *Pacific Medical Journal* states that the San Francisco Board of Health have discussed the existence of cholera in Yokohama, and by resolution have declared that city an infected port. The quarantine officers have been ordered to use extra vigilance in examining all vessels from the Orient, and most vessels with their cargoes, and the baggage of both passengers and crew are now disinfected. This is the only wise course to pursue. If the germs of cholera are landed on our shores they must come by the vessels from over the Pacific, and the San Francisco Board of Health with its quarantine officers must be held responsible. In this instance quarantine should be effective—should it, however, prove futile, the next measure to adopt, and which in truth should be enforced now, is to follow the advice of the State Board by placing our cities, towns, hamlets and individual premises in such a state of order and cleanliness that the disease can find no accumulated filth in which to incubate its germs.

SPECIALTIES AS THEY MAY BE.

Subdivision to extreme minuteness has been the modern tendency in pathology, in the description of morbid processes and of all departures from normal conditions. On account of the sublimation and refinement to which it has been subjected, that subject has been generally regarded as one which was not sufficiently attractive to become popular. The same tendency to subdivision has been apparent in the department of surgery, and to a certain extent this is unavoidable, because that important department necessarily requires a regional apportionment of its study and practice; but the result is that specialism is thus allowed to invade and appropriate to itself several distinct and separate fields.

While the general surgeon is improving and perfecting operative procedures upon all the important organs and cavities, the surgical specialist seems to be concentrating his skill upon regions bordering, in the two sexes, chiefly on the natural outlets, rectal and genito-urinary. While the value of their services in this direction must not be underrated, we trust that the time may be far distant when, with the present tendency to subdivision of surgical labor or of localities for special operations, it may become necessary to set apart organs, instead of regions, for special operative interference, and thus to still further increase the number of specialties.

And we are now reminded that we have more than once expressed the view, editorially, that it was not a happily chosen designation of one important and useful class of practitioners of a surgical specialty, that they should be denominated "Genito-urinary Surgeons." In what respect, we have inquired, are they, as individuals, more "genito-urinary" than any other surgeons, or, indeed, any other of their professional brethren? If membership in the "Association of Genito-urinary Surgeons" is not limited to the "male persuasion," would not the admission of the female element produce a confusion of terms—for are not the latter quite as "genito-urinary" as the other sex, and would not the Association, so far as anatomical construction and physiological capabilities are concerned, be composed of two distinct classes of genito-urinary members?

But this is only a passsing thought. What we wished to say, before we entered upon this diversion or divergence from our theme, was, that there is danger, in time, that the subdivision of specialties may become so minute that each organ of a series or apparatus—say the genito-urinary chain of organs—may become the central figure of a specialty. Is it possible that in those days we may have bladder surgeons, urethral surgeons, perhaps penal surgeons? Then, too, it is not beyond the range of possibilities that we shall have vaginal surgeons, who will call the intra-uterine surgeon into consultation should the disease under treatment invade the precincts allotted to that specialist? Judging from the rapid advances of specialism in the past, what may we not expect from it, in its various ramifications, in the not very distant future? —*College and Clinical Record.*

FERULA SUMBUL IN CHOLERA.

It is stated in one of the daily papers that several medical experts have been sent by the Russian Government to Asia Minor to test by experiment the treatment of cholera with ferula sumbul, a plant growing in Turkestan, and possessing antispasmodic properties. Musk root, as the root of this plant is called from its strong musky smell, has been used for a long time by the Russian physicians as a remedy in cholera, dysentery, and febrile diseases of a typhoid or adynamic type. Sumbal root is official in the British Pharmacopœia, and as obtained in this country is in circular pieces, consisting of transverse sections of the root, with a wrinkled epidermis of a light brown color. It is employed as a stimulant, like the aromatic oils in general. It specially resembles valerian and musk, and is used in the same class of cases as these drugs. It will be interesting to know definitely whether sumbul possesses any special property in the treatment of cholera different from that of the other aromatic stimulants in use at the present time.—*Lancet.*

SEPULTURE IN ITALY.

Italy claims, and with justice, to have led the movement by which cremation is being adopted throughout Europe as a means of disposing of the dead. The first crematorium was established on January 26, 1876, at Milan, and on December 31, 1888, there were in the peninsula twenty-one communes having crematoria in constant working; and other twenty-one communes in which crematoria were either in course of completion or in contemplation. After all, Italy is only returning to a usage which belonged to her classic period, but the circumstances that caused her to return to it do her little credit. In a highly interesting report, issued by the Government Statistical Office, on the "Condizioni Igieniche e Sanitarie dei Comuni del Regno," we read a frightful account of the mode of interment practiced within her borders, and even now but partially reformed. As recently as

1885, out of 8,258 communes only 7,864 had one or more cemeteries of their own, while 120 communes availed themselves of cemeteries constructed on the territory of a neighbor. In 274 the dead of the commune were interred in churches or receptacles hard by, and in 628 the only means of disposing of the corpses (of the poor, we presume) was to throw them into a common pit (*fossa carnaria*). Nor was this all. Of these charnel pits, 258 were within the inhabited radius, and 40 were at less than the regulation distance from this radius—that is, 200 metres. In other words, the mode of interment practiced in war, and excused only on the ground of necessity, was the established, every-day custom in 628 Italian communes five years ago. No wonder that the resort to cremation meets with such ready acceptance throughout the peninsula. Concurrently with the introduction of the crematorium, however, which only in exceptional quarters is available for the poor, public agitation is to be maintained. And we are hence glad to state that both in this country and elsewhere preparations are being made, by way both of improved sanitation and by the provision of means of isolation, to meet any imported infection. In France there is an evident determination to insist on the strict enforcement of the regulations as to notifying residence by persons who are allowed to pass the frontier from Spain, and several who have failed to comply with the rules as to this have been both fined and imprisoned. *Lancet.*

ALARMING FATALITY.

The Secretary of the Health Department of Yokohama recently reported that for the four days from August 29 to September 1, inclusive, there were sixty-two cases of cholera with fifty-one deaths. From the beginning of the epidemic the whole number of cases had been three hundred and eighty-five of which two hundred and seventy-nine died. The number of cases reported is not surprisingly large, but the death-rate is alarmingly high, indicating either wretched unsanitary conditions, unskillful treatment, or a very malignant type of the disease. It is probable that all these influences have to do with the high mortality, but more than likely the controlling one is the lack of popular sanitation.—*Pacific Med. Journal.*

UNIFORM NOMENCLATURE IN ANATOMY.

The establishment of a uniform nomenclature in anatomy, which was taken in hand by German anatomists about a year ago, has now become an international affair; and the committee appointed for the purpose, which has hitherto consisted exclusively of Germans, now numbers three foreign members—namely, Lebouceq of Geneva, Cunningham of Edinburgh, and Romiti of Pisa. The expenses of the task are to be borne by the learned corporations of Germany, because the Anatomical Society, which began it, does not possess the necessary funds. The Prussian, Bavarian and Saxon Academies of Science have contributed 1,500 marks (nearly £75) each, the Academy of Vienna 1,000 guildens (about £85), and the Anatomical Society 1,000 marks (nearly £50). The completion of the work will be entrusted to a commission, presided over by Professor von Kölliker of Würzburg. The preliminary work is to be done by an anatomist of special qualifications, including the necessary philological attainments.—*Lancet.*

THE STUDY OF OPHTHALMOLOGY IN HUNGARY.

In consequence of the alarming increase of granular ophthalmia in the south of Hungary, the Minister of the Interior has arranged that courses of instruction on the treatment of this affection shall be given to medical practitioners in different centres. These will last a fortnight. The first course, which is now just completed, was given in the Eye Hospital at Maria-Theresiopel. Other courses will be given both there and at Szegedin. Practitioners attending these courses will receive a Government allowance for their traveling and other expenses.

THE QUESTION OF SHOCK DURING OPERATIONS UNDER ANÆSTHETICS.

A correspondent, referring to recent notices of deaths under chloroform, draws attention to the fact that it is expressly stated that in one case deceased was not deeply under when the operation was commenced and completed; whilst in the other, death occurred before the patient was completely anæsthetized. Many observers have noticed what they regarded as reflex syncope during imperfect anæsthesia, and Dr. Lauder Brunton, we believe, both in his lectures and in his "Pharmacology," laid down that imperfect anæsthesia rendered the patient peculiarly liable to cardiac failure through afference of sensory impressions conveyed from cutaneous or visceral nerves. It is certainly a commonly recognized phenomenon that tying the spermatic cord, handling the intestines and dragging upon intra-abdominal viscera produce, even under chloroform, not only marked variations in the pulse, but also variations in the rhythm of respiration. During the experiments made by the recent Hyderabad Commission, it will be remembered that no such interference with the heart's action appeared to occur in dogs, at least as far as the Commission were able to reproduce in the lower animals the more complete conditions of the experiment as presented by human beings undergoing an operation under chloroform. In settling this and kindred questions, we shall probably have to recognize as a factor the difference arising from the greater or lesser elaboration of the nervous system in the animals, human or otherwise, under investigation.—*Lancet.*

THE MEDICAL DEPARTMEMT OF THE BRAZILIAN ARMY.

The medical department of the Brazilian Army is being reorganized. The officers and their ranks are as follows: 1 inspector-general (general), 3 first-class surgeons (colonels), 9 second-class surgeons (lieutenant-colonels), 27 third-class surgeons (majors), 85 fourth-class surgeons (captains), and 75 assistant surgeons (lieutenants). The pharmaceutical officers are: 1 first-class pharmacist (lieutenant-colonel), 2 second-class pharmacists (majors), 8 third-class pharmacists (captains), 32 fourth-class pharmacists (lieutenants), and 44 assistant pharmacists (sub-lieutenants).

PRACTICAL NOTES.

SALIPYRIN.

Prof. Gutmann (*Deutsche med. Woch.*), gives an account of a series of experiments which he has made with salipyrin in the Morabit Hospital, Berlin. Salipyrin is a combination of 57.7 parts of salicylic acid and 42.3 parts of antipyrin—$C_{18}H_{19}N_3O_4$. It is a white powder without smell, of slightly acidular taste, easily dissolved in alcohol, but not in water. Professor Gutmann's therapeutic experiments gave the following results: 1. Salipyrin lowers the temperature in fever. In cases of high continuous fever, a first dose of 2 grams, and four succeeding 1-gram doses at intervals of an hour, proved most successful, and reduced the temperature by about 1½° to 2° C. The lowest temperature is reached in about three to four hours, then a rise follows, until nearly the original height is reached in four to five hours. Perspiration, more or less profuse, usually accompanies the fall of temperature. In common with all other antifebrile remedies salipyrin has a more powerful effect in cases of less resistent intermittent fevers. 2. Salipyrin is as beneficial in cases of acute rheumatic fever as salicylic acid (and its preparations) and antipyrin; but it is equally inefficient in preventing relapse. The quantity prescribed *pro die* was usually 6 grams, distributed over six doses given every two hours. 3. Salipyrin is effective in cases of chronic rheumatism of the joints, and rheumatic sciatica. 4. Salipyrin was found to have no disagreeable secondary effects, even where patients took 6 grams daily for a fortnight or longer. In one case only an eruption over the whole body was observed, which disappeared after three or four days. The color of the urine is not affected by salipyrin. Taking the results of his experiments together (which experiments extended over more than 2,000 grams) Prof. Gutmann comes to conclusions that can scarcely be called highly encouraging. He finds that salipyrin may be used for the same therapeutic purposes as antipyrin and salicylic acid, but that where an antifebrile effect is intended the dose of salipyrin must be double that of antipyrin.—*Brit. Med. Journ.*

MILK AND TYPHOID FEVER.

Dr. Vincent, physician to the Geneva Board of Health, has just published a careful report on the typhoid epidemic which raged in that city last spring, particularly in the Quartier des Paquis. He succeeded in tracing the outbreak to the milk with which the people in general, and the inhabitants of that quarter especially, were supplied. The most culpably negligent and untidy system of cleansing the milk cans prevailed; indeed, in one extensive dairy he saw a milkman spitting on his hand in order to lubricate them for the scouring process to which he presently subjected the inside of those receptacles. Another source of the mischief was found in the carelessness with which the watering of the milk was practised—any water, pure or impure, being reckoned suitable. He strenuously urges on all who wish to escape the risk of contracting typhoid to boil their milk, and to see it done themselves. Milk sold as already boiled had not, in many cases, according to his experience, been properly boiled at all. The most perfunctory methods of boiling he found in constant practice. The moment the milk began to stir in the boiler and to bubble a little it was regarded as boiling and taken off the fire! Even had the boiling-point been adequately reached, he insists that the milk should still be kept on the fire for some minutes, if it is to be made perfectly innocuous. On the present system he thinks the microbes it is sought to destroy have every chance of surviving and of propagating their kind to increased activity.—*Lancet.*

USE OF ALKALIES IN DYSPEPSIA.

Germain Sée, in an article published in the *Semaine Médicale*, says that alkalies frequently fail to do good in dyspepsia, owing to improper methods of administration. He recommends that 45 to 60 grains sodium bicarbonate, dissolved in warm water, be given at the time of the greatest acidity, which is generally two or three hours after meals. Smaller doses do not sufficiently neutralize the acid, while larger ones may do harm by leaving the stomach contents alkaline, the object being to keep the gastric juice at its normal acidity. In dyspepsia, with unsufficient secretion of hydrochloric acid, such as is met with in anæmia and neurasthenia, alkalies in small doses should be given half an hour before meals. It has been experimentally shown that this increases the amount of acid secreted. General hygienic and dietetic treatment should not be neglected.

QUININE AND PREGNANCY.

Merz (*Bulletin Méd. de l'Algérie*, January and February, 1890) concludes that, by setting up uterine contraction, quinine may cause abortion during the first three months of pregnancy. During the last three months that drug hardly ever provokes labor. The action of quinine during the middle months is uncertain; it certainly appears to grow less noxious as pregnancy advances. From the above conclusions it is evident that quinine ought to be avoided during early pregnancy, unless there be dangerous symptoms due to paludism.

SOCIETY PROCEEDINGS.

New York Neurological Society.

Stated Meeting, October 7, 1890.

THE PRESIDENT, L. C. GRAY, M.D., IN THE CHAIR.

TUBERCULOUS MENINGITIS.

DR. W. B. PRITCHARD presented the brain of a patient who had died from this cause. When first seen by the speaker the man was suffering from obstinate insomnia and headache. A few days subsequently the thermometer had shown some elevation of temperature, but this had never exceeded 103° at any time until shortly before death. The mental disturbances were very marked from the beginning. There was complete loss of memory, right-sided ptosis, difficulty and finally loss of speech, and the rapid development of symptoms of complete bulbar paralysis. The apparent immediate cause of death was the involvement of the vagus. There was decided right hemi-paresis. A very offensive purulent discharge from the nose was persistent, which continued until death. The autopsy had revealed over the right parietal bone a cavity about the size of a silver dime, the necrosis being presumably tuberculous in character. Over the patient's right eye there was a linear scar with a depressed fracture, but no apparent affection of the brain from this cause. At the base of the brain there was found a thick, tenacious material. The medulla, pons, crura and cranial nerves were involved, and the dura was covered along the convexity of both hemispheres with what was presumed to be masses of tuberculous deposit.

CAN WE DIAGNOSE HYPERÆMIA OR ANÆMIA OF THE CORD AND BRAIN?

DR. WILLIAM A. HAMMOND read a paper with this title. The writer had for many years been familiar with a group of symptoms which from their etiology and general characteristics were indicative of cerebral disturbance. Some twenty-five years ago, after considerable observation and many experiments performed upon living animals and the human subject, he had come to the conclusion that they were the result of an increased amount of blood circulating in the brain. The theory which the writer had advanced was, that natural sleep was due to a comparative anæmic condition of the brain, normal wakefulness to an abnormal quantity of intra-cranial blood. Persistent insomnia was the necessary accompaniment of the pathognomonic symptom of the affection in question. Without wakefulness then, there was no cerebral hyperæmia, with cerebral hyperæmia there was always wakefulness. If this symptom was associated with pain in the head, heat, and feeling of distension, vertigo and hallucination, and was increased by the recumbent posture, and drugs which increased the circulation in the brain, there could be no doubt of the diagnosis of cerebral congestion in such a case. The writer had made many experiments with ergot and was convinced of its efficacy in diminishing the quantity of intra-cranial blood. In conclusion he said that if a patient came to him suffering from insomnia, pain in the head, vertigo, hallucinations, suffusion of the face, cephalic heat, and other striking symptoms of perhaps less special importance, and when he found the symptoms disapper under the influence of remedies, such as the bromides, ergot, ice and douches of cold water to the nape of the neck, cups in the same locality, usual blood-letting, or spontaneous hæmorrhage, position, and other means calculated to diminish the amount of intra-cranial blood, he did not see how an escape was possible from the deduction that the patient was suffering from cerebral hyperæmia.

DR. M. A. STARR said that while he did not wish to be understood as representing those who opposed Dr. Hammond's views, still his convictions at present were those expressed by Dr. Gray in his paper read recently before the Society. The symptoms which had been explained by the existence or assumed existence of cerebral hyperæmia were many of those symptoms which could be produced by other causes; such, for example, as wakefulness, which was often noticed in individuals when very much exhausted. In puerperal women who had suffered severe hæmorrhage. He had also certainly observed it in patients who were anæmic. Therefore to say that wakefulness necessarily indicated an hyperæmic brain was to advance a theory which was hardly tenable. Certainly hyperæmia of the brain might under certain conditions be diagnosed, but it was a very open question whether this could be done when only wakefulness was present. As to the question of drugs, they had been very much surprised to hear it stated by Dr. A. H. Smith and Dr. Peabody, at a meeting of the Practitioners' Society last winter, that those gentlemen had been treating cases of supposed hyperæmia of the brain with nitroglycerine and nitrite of amyl. These drugs, which were supposed to increase the supply of blood to the brain, were being given upon the hypothesis that they dilated the entire arterial system of the body, and the brain would therefore be relieved to a certain extent of blood. The reasoning at least appeared sound. The speaker thought it impossible to base a diagnosis upon any individual symptom.

DR. J. LEONARD CORNING thought this was not scientific reasoning. The truth might probably be more nearly arrived at by careful induction. If a man came complaining of headache, having a congested face, with a pulse of high tension, whose symptoms could be promptly re-

lieved by pressure upon the carotids, the jugulars, or bandaging of the legs, might such a patient be assumed as suffering from congestion or anæmia of the brain? The speaker thought congestion. Suppose quinine or alcohol should be given to such a patient and it was found that the symptoms were aggravated, it would be certainly concluded that the trouble was congestion.

THE PRESIDENT said that of course Dr. Hammond spoke with authority, this they were all prepared to admit. The fact that he was able to do so had much to do with the acceptance of his conclusions without criticism. Still no dictum in relation to a scientific point could be allowed to stand on personal authority alone. The conclusions must bear the force of investigation and be supported by fact. Dr. Hammond must not consider the discussion as having the least personal bearing, but as merely the expression of a general desire to elucidate the problem as far as possible. Dr. Hammond had stated the symptoms of cerebral congestion as being sleeplessness, with a certain feeling of compression or oppression about the head and a flushing of the face.

DR. HAMMOND here suggested that he had said these symptoms were increased by the dependent posture, or by anything which would increase the circulation.

DR. GRAY accepted the correction and went on to enumerate the conditions in which these symptoms might be found. For instance, insomnia was common enough in mental diseases and worry, melancholia, overwork, constipation, and in many conditions in which there was nothing to show that there existed any hyperæmia of the brain. In the early stages of intra-cranial syphilis there was a condition somewhat of the nature of hyperæmia. But then in Bright's disease, in which there was hyperæmia and congestion, there existed a condition of stupor. If the list of causes of insomnia were gone through, it would be possible to find a certain train of symptoms which would lead to the assumption of existing anæmia in some, and hyperæmia in others. Experiments had recently been made on the brains of animals, the report of which differed from those of other recorders, as to the point made that the brain rose or increased in volume during the waking period. It was an open question whether this was not due to cellular action producing an increase of blood. As to the association of sleeplessness with the recumbent posture, of course the extended observations of the author of the paper were deserving of due consideration, but so also were the more limited observations of the speaker in this respect, and he had not been able to verify the association. The question before them was not as to the existence of cerebral hyperæmia or anæmia, but as to whether it could be clinically diagnosticated. Flushed face might be dependent upon chorea, general paresis or injury to the brain. It was impossible to say whether the symptom was brought on by hyperæmia alone. The feeling of oppression and sense of fulness in the head was found associated with errors of refraction, insufficiency of the ocular muscles, changes of climate, errors of diet, etc. To assume that in all those conditions there was hyperæmia of the brain was assuming a good deal, and more than could be proved. It was a point which had not been demonstrated by any pathologist, as to whether there could exist by itself an increased amount of blood in the cellular tissue or other finer structures of the brain without causing disease of the surrounding parts. It was strange that Dr. Hammond, after five months' preparation of the subject, had cited no autopsies in confirmation of his theory.

DR. C. L. DANA said he thought it was now generally agreed that there was such a condition as cerebral hyperæmia, and that it could be recognized in its acute forms. Such a state might be produced by drugs, congestive neuroses, trauma, etc. The question was and is, what was the condition at the base of that functional disorder which had gone by the name of cerebral neurasthenia? whether its initial stage was that of hyperæmia or the hyperæmia was a secondary process. An acute and chronic hyperæmia of the brain were conditions admitted to exist, but it was preferable to say functional cerebral neuroses or psychoses, where the hyperæmia was a secondary process, and that seemed the inevitable conclusion to those who watched these cases. Many patients among the neurasthenics showed symptoms of congestion of the brain, others of this class did not in any way present the symptoms of the classic type of cerebral hyperæmia, but showed the condition so shaded down that it was necessary to set aside all the symptoms generally described. There was something at the back of the hyperæmia. The hyperæmia of the brain was secondary to some disorder of the vaso-motor nerves, or to some functional condition involving the whole nervous system. As to insomnia and cerebral hyperæmia, that question was obsolete. To state that sleep was produced by anæmia and wakefulness by the return of the normal amount of blood to the head was, the speaker thought, in the light of modern neurological studies, a theory which could be described as unworthy further investigation.

DR. HAMMOND thought that his points had been unanswered in the arguments. When Dr. Dana said that the neurologists of to-day ignored the theory of the physiological changes during sleep, a theory which the speaker might claim as his own, he thought Dr. Dana in error. He would remind them that he stated that headache presented innumerable causes for its existence, and it was only when he found it with flushed face, and vertigo, and when it was increased by the de-

pendent position of the head, that the diagnosis was certain. Then he knew his patient had hyperæmia of the brain, all the neurologists in the world to the contrary.

THE SENSATION OF ITCHING.

DR. E. B. BRONSON read a paper on this subject. Notwithstanding the fact that the special senses in their present state were so far removed in respect to the knowledge they yielded to consciousness from common sensations, there doubtless was a period when the distinction did not exist. Their differentiation had been the result of gradual and long continued processes of evolution. There could be little question that the sensory organs to which the several senses owed their special attributes had all originally developed from simple nerve endings that gave but the vaguest intimations of external objects. In this evolution the impelling force had been derived from the two grand principles of life, known as the instinct of self-preservation and the instinct of reproduction. There still remained to the skin and mucous orifices a variety of sensations, others more specialized, including a special sense with perceptive faculties, and finally the most important representative of the reproductive instinct, the aphrodisiac sense. The only sense with which the skin was endowed, that could be called perceptive, and that was worthy of comparison with seeing, hearing, smelling and tasting, was the sense of pselaphesia. In included the sense of contact which was seen in its most primitive form; its most important element was the pressure sense, while the temperature and muscular senses were more or less auxiliaries. Common sensation was represented in the integument in its highest positive aspect, by the voluptuous sensations, in its lowest negative aspect by pain. Returning to the question, what relation to the sensory organs of the skin and to their sensations, did the sensation of itching bear? The author believed that there was sufficient evidence to locate the essential seat of pruritus in the epidermis. From elaborate research the author has drawn the following conclusions: 1. That there was a sense of contact independent of the sense of contact; 2. That this sense of contact was the sense disturbed in pruritus; 3. That it primarily concerned simple nerve endings in the epidermis; 4. That the disturbance in pruritus was of the nature of a dysæsthesia, due to the accumulated, or obstructed nerve excitation with imperfect conduction of the generated force into correlated nervous energy; 5. That scratching relieved itching by directing the excitation into freer channels of sensation sometimes, substituting for the pruritus either painful or voluptuous sensations; 6. That the voluptuous sensation might attend pruritus was a manifestation of a generalized aphrodisiac sense, representing a phase of common sensation that had its source in the sense of contact.

DR. L. D. BULKLEY considered Dr. Bronson's paper one of the most scholarly he had ever listened to. He then referred to some studies he had made as to the reflex character of itching. For instance, if the itching sensation were on the finger of the right hand irritation or pinching of that finger would cause a reflex sensation in the neighborhood of the scapula of the same side. He had only found one or two instances in which it was transferred to the opposite side.

DR. STARR asked whether it was ever thought that itching was a symptom of central nervous disease. Patients with locomotor ataxia were said to be frequently troubled with itching around the arms, scrotum, and perineum. He had never seen a case confirming this.

DR. B. SACHS had never seen it in organic nervous disease, but in functional disorders, such as crural neuralgia he had known the itching to be more obtrusive than the pain. It was a frequent condition of profound anæmia and often observed in hysterical women, and in cases of hystero-epilepsy.

Philadelphia County Medical Society.

Stated Meeting, September 10, 1890.

THE VICE-PRESIDENT, JOHN B. ROBERTS, M.D., IN THE CHAIR.

DR. BENJAMIN T. SHIMWELL read a paper on

A NEW METHOD OF DELIVERING THE FŒTAL HEAD.

Nature's manner of delivering the fœtal head has been followed by obstetricians from time immemorial; recognizing the fact that the occiput is born under the symphysis pubis in normal labor. The face and chin stretch the perineal body, then force their way out, requiring an especial amount of care to prevent tearing of this tissue. The extent of injury to the pelvic floor is not properly appreciated; if the superficial tissue of the perineum is safe the attendant congratulates himself on his possible skill; or if aware of deeper injury, feels grateful that no apparent injury is shown to the watchful eyes of the nurse or patient's friends.

Thus do thousands get out of the confinement-bed ruined in health, carrying into the future injuries that must of necessity bring ill-results. Various plans have been suggested to support and accommodate the perineal body to the oncoming head.

It is strange how often the anatomical construction of the perineum is overlooked, and considered merely as a space-filler. It is by this that so much injury is done. The gynecologist's specialty lives by these results.

These are the reasons, hastened probably by experience gained in the above manner, that have induced me to write this paper. The theory that will be advanced, backed by my application of it in a great number of cases, is evidently new; if not, it has not come to my knowledge by reading or otherwise. The advantage of this method is the saving of the pelvic floor from injury, either superficial or deep. No attempt is made to show expedition, but a modification of the ordinary method of labor changing the direction of the impinging force.

Naegele says that 70 out of every 100 vertex presentations are in the first position, the other 30 are occiput to right and posterior. The remaining positions are exceedingly rare.

When the head presents in the first position the body of the child must not be overlooked. The back of the child must present to the front and left, the chest to the back and right; therefore at right angles with the vertex presentation of the head at the superior strait. The important point in this theory is the rotation of the head to the symphysis pubis. The manner of the rotation of the head is mooted. Pajot claims that the shoulders participate in the rotation, but contradicts himself when he further says: "That it is above all the shape of the child's head which decides the character of the movement;" also, "that the occiput will, therefore, be carried forward less on account of the direction of the forces which impel it, than because of the necessity for accommodation of the cephalic surfaces to the pelvic surfaces." All writers admit that after expulsion of the head occurs restitution takes place, that in a case of first position, after the head is delivered, the head turns with its occiput to the left thigh—that is, in the direction that the head presents at the superior strait; this is an untwisting of the neck.

Gerdy claims that this is "an external expression of a movement of the shoulders within the pelvis, by which the biacromial diameter passes from the transverse to the antero-posterior diameter, the head following the internal rotation." The folly of this assertion is on its surface. The head is free and the neck and body are constricted by the vagina and uterus, and if rotation does take place, can we overlook the anatomical relation and action of the atlas vertebræ? Would not the weight of the head allow of the rotation internal without its external manifestation?

Penrose (Hirst, vol. i, p. 571) says: "While the head has rotated, the body of the child, still in the cavity of the uterus, has been tightly grasped by the firmly contracting walls of the uterus, and has not participated in the movements of the head; hence the shoulders are still oblique at the superior strait, consequently the neck of the child is twisted." The latter theory, according to my experience, is the true one. The fact of the anatomical construction of the cervical vertebræ of the child cannot be overlooked. This arrangement allows of a rotation of one-fourth of its circumference to take place without injury to the spinal cord. Therefore, if Pajot's theory of the accommodation of the cephalic surfaces to the pelvic surfaces, rather than the application of the force, is true, then it can be seen that rotation of the head is possible without the shoulders. Then, again, the head is not free to wobble around the pelvis when it has reached such a condition of flexion, neither is the neck a rigid body depending on the shoulders for its position. If the theory of shoulder rotation is so, then nature's method is superfluous; for why should the biacromial diameter be changed from its oblique position, which is nearer the antero-posterior diameter, to the transverse, then rotate back again beyond its former position to the antero-posterior?

Playfair believes in partial rotation.

Believing, then, that the shoulders still maintain their oblique position through all the stages of the delivery of the head, what occurs when rotation brings the occiput directly antero-posterior? This has been accomplished by the rotation mentioned of the atlas on the axis vertebræ to one-fourth of its circumference; this having occurred, the delivery of the head takes place, then immediately external rotation or restitution occurs, that is, the neck untwists.

The outlet of the female pelvis is four inches antero-posterior and transverse. The antero-posterior is possibly increased a half-inch by extension of the coccyx. These measurements are decreased by the soft tissues; this is more marked in the antero-posterior by the rectum and perineal body. As the head in the last act of delivery begins to extend, we have presenting the cervico-frontal diameter, which is four inches; this has to pass through a space that is but four inches, possibly four and a half inches, lessened by the perineal body, which is at this stage excessively stretched and attenuated. As the safety of the perineum is an exceedingly important matter, it occurred to me that this might be accomplished by lessening the size of the impinging body and transferring the extending head into another direction. It is the nose and chin that rupture the pelvic floor, therefore if the direction of this force can be changed to some other point than the junction of the levator ani muscle, it can be easily seen how injury to this muscle can be prevented.

When the labor has reached this stage, I place the woman across the bed on her back, knees well drawn up, then compel her to breath with her mouth wide open to prevent bearing down. As the head presents in the oblique direction and to reach the antero-posterior diameter it rotates, twisting the neck, the first step in the method is to reëstablish the direction of the first impinge-

ment; this is not done until the cervico-frontal diameter is reached; *this must be complete*, then forcing the head into extreme flexion by grasping the presenting occiput by the hand (in non-instrumental labors), I begin my rotation; the first step is to untwist the neck; this accomplished, the head presents cervico-frontal to the left anterior. I then take advantage of the same anatomical construction of the cervical vertebræ that allows of the normal rotation, and rotate one-fourth in the opposite direction, that is, to the left. The cervico-frontal is then transverse, the neck lying on the labia of the left side, the forehead beginning to engage the soft tissues of the right labia. What is now presenting to the antero-posterior diameter, or, what is more important, to the perineum? The biparietal diameter, which measures three and one-half inches, therefore less tension on the perineum. The possibility of delivering the head in the transverse diameter has been questioned. The articulation of the head to the spinal column is wisely arranged; if no other object than birth was intended, it has well served its purpose. The diameters of the extending face are those of a right-angle triangle, the hypothenuse of which is four inches, the perpendicular three inches, the base two and four-fifths inches. The mechanical advantage of this is apparent. If the measurements had been those of a triangle, the impossibility of delivery is easily seen, the head could not be born as long as the perineum existed. The sweep of the extending head would be the same at the chin as at the forehead, and the perineum would be torn in every case and in every succeeding labor; but the measurements are those of a right-angle triangle, and of a necessity the chin must recede when complete extension takes place, so when extension is made in the transverse diameter of the inferior strait the chin does not impinge on the ramus of the ischium.

Having got the head into this position, I begin the last stage of the delivery of the head. The head has been all this time in extreme flexion, then extension is performed, the soft tissues of the labia push aside, and nose follows on forehead, chin on nose; delivery is complete, and the pelvic floor is safe. The head then untwists to its normal position.

DR. E. E. MONTGOMERY: I think that the members of the Society are greatly indebted to Dr. Shimwell for the graphic presentation of this method of dealing with the delivery of the head and effort to save the perineum. This certainly is a violation of that old principal which has been handed down the ages, that "meddlesome midwifery is bad." When we consider that all progress in obstetrics and every step in advancement has been in violation of this principle, this thought may not be considered an objection to this procedure, which certainly seems to be one which should be serviceable. But, not having had experience myself, I am unable to say more than these few words in commendation of it.

DR. J. M. BALDY: It seems to me that the remarks of Dr. Montgomery in regard to meddlesome midwifery are true as regards pathological processes, but not as regards physiological processes. Certain it is that in almost everything in which we have attempted to interfere with physiological processes, we have found that they have been carried an a great deal better by Nature herself than by any so-called improvement that we have made on her. If Nature had meant that the head should be delivered in the transverse diameter of the outlet, she would have given us some indication of such desire. On the contrary, she has shown us very clearly and distinctly that the head was to be delivered in the antero-posterior diameter. It is probable that the head can be delivered in the transverse diameter, as Dr. Shimwell has pointed out, if all the measurements are of average size; but all of us know perfectly well that it is the exceptional head that we come across, and not the typical head. Many of the heads are large, and the higher we get in the stage of civilization the larger the head. The normal head may go through, but I doubt not that Dr. Shimwell will run across many cases that he will not be able to deliver in the transverse diameter. Unless the head will pass easily, we have here no room for extension of the outlet. It is a fixed quantity bound by bony walls—the ramus of the ischium on both sides—and there can be no distension. On the contrary, in the natural methods of delivery, we have free room for extension taking place through the perineal body and the soft part of the lower part of the pelvis. Now, it may be that there is danger to the levator ani muscles from over-distension, but at the same time I conceive, and it has been my experience, that the danger to these muscles is greater in proportion to the amount of interference we give to the perineum. In other words, we have here a hard body starting from a given point and progressing at a certain angle to a certain point at which it meets a plane of resistance, that plane of resistance being the soft parts of the pelvic floor, and, if you will, principally the levator ani muscles. There is a well-known physical law, that any body moving in a given direction and meeting with an obstacle, will be deflected at a certain angle. We have this occurring in delivery of the head. The head comes down and meets a resistance, which, although not a fixed resistance, is sufficient to cause deflection in the line of least resistance. This line of least resistance is the opening of the vulva. If resistance is given to the head at that point, the head is prevented from bulging through the vulvar orifice, and the *vis a tergo* being still active,

must be spent at some place, and that place is at the point of contact of the head with the pelvic floor. Taking the head, which is bulging the perineum and presenting at the vulva, we hold it back by pressure on the perineum, or by some other method; then we are going to have the greater part of the *vis a tergo* exerted at this one point. These soft tissues of the pelvic floor are capable of yielding to a certain point, and when they come to that point, they are going to give, and there will be a tear of the levator ani muscles and of the other tissues involved. This is where, I believe, the vast majority of tears of the perineum come in. All teachers teach that the head should be held back in some way or other, so that the vulvar orifice is not allowed to expand, and the head protrude, as Nature intended; and by this misapplied force we bring about the accident we are trying to avoid. I have found in the cases in which I allowed Nature to take her course almost entirely, keeping the fingers from the head and perineum, excepting to make slight pressure and lift the head up against the pubic arch, that they have done better and I have had fewer tears, and those that have taken place have been of a minor degree as compared with those where I tried to prevent injury by supporting the perineum. Any support of the perineum whatever is pernicious. I believe that all the teachers and all the books are at fault in that respect. Nature did not mean to have the head held back and have the whole force spent on one part, when we have the elasticity of all the soft parts well anchored, so as to yield and to give room for the head to pass. Supporting the perineum prevents the proper stretching of these tissues, and prevents any good they may do in bulging the perineum and forcing the vulvar orifice open.

DR. SHIMWELL: I am exceedingly sorry that some of my friends who have used this method successfully have not spoken. Dr. Baldy has raised the objection that a large head could not be born transversely, but the same objection applies to the antero-posterior position as well. He overlooks the fact demonstrated by the mathematical figure, that we gain, as the chin is delivered, a fraction over 1¼ inches. The head is born without impinging on the soft tissues of the pelvis.

I have tried this method successfully for a year and a half, both in primiparæ and in multiparæ. I have used it both in cases terminated without instruments and in those where the forceps have been required on account of loss of tone or from malformation on the part of the head or of the pelvic outlet.

In regard to Nature—Nature is not always a good worker. If so, why should we have a disproportion between the head and the pelvis? The outlet should be made equal to the head. With regard to the increase in the size of the head with advancing civilization, I know that; but is the pelvis unchanged? Is it not rather lessened? Has it not changed its size and shape?

The points advanced are, I think, no argument against the method. It is a safe method; it is an easy method; and the delivery is accomplished with perfect safety to the child and to the mother.

Stated Meeting, September 24, 1890.

THE VICE-PRESIDENT IN THE CHAIR.

DR. CHARLES B. PENROSE read a paper on

THE TREATMENT OF HÆMORRHOIDS BY EXCISION.

My object in presenting this paper is to urge the more general use of Whitehead's operation of excision in the treatment of certain cases of hæmorrhoids.

In 1887 Mr. Whitehead, of Manchester, reported[1] three hundred consecutive cases of hæmorrhoids which had been successfully treated by the method of excision and suture. His operation is performed in the following manner:

1. The patient is placed on a table in the lithotomy position, with the hips well elevated.

2. The anal sphincters are then thoroughly paralyzed by digital stretching.

3. The mucous membrane of the rectum is divided at its junction with the skin around the entire circumference of the bowel.

4. The mucous membrane, with the attached hæmorrhoids, is dissected from the submucous tissue, and the cuff or cylinder thus formed is dragged below the skin margin.

5. The mucous membrane above the hæmorrhoids is then divided transversely, thus removing the pile-bearing area, and the operation is completed by suturing the upper margin of the severed membrane to the free margin of the skin.

The advantages claimed by Whitehead for this method of treatment are based on pathological and on surgical reasons. He considers that the internal hæmorrhoids, which are generally regarded as localized distinct tumors, amenable to individual treatment, are, as a matter of fact, component parts of a diseased condition of the entire plexus of veins surrounding the lower rectum, each venous radicle being similarly, if not equally affected by an initial cause, constitutional or mechanical.

The operation of excision is the only one which removes this whole diseased area. It is, therefore, demanded for this pathological reason. It is, in addition, surgically more perfect than any other method of treatment, because it provides for the readjustment of healthy tissues with the object of securing primary union and rapid convalescence. It does not leave the sluggish ulcer of the cautery, nor is it attended with the pain and slow convalescence of the ligature.

[1] British Medical Journal, February 6, 1887.

My experience with this operation is limited to ten selected cases. Only those cases were selected in which there existed a complete circle of hæmorrhoidal tumors surrounding the lower margin of the rectum, since for such cases Whitehead's treatment of excision seems to be most particularly adapted.

The details of the operation are simple and easy to execute. In dividing the mucous membrane from the skin it is best to begin at the posterior margin of the anus in order to prevent the blood from obscuring the field of operation. No skin should be sacrificed, even though there appear to be redundent tags around the margin of the anus. The skin always retracts somewhat and the tags shrivel and disappear before firm union has taken place. Failure to observe this rule may result in subsequent serious trouble. Kelsey[2] reports the case of a woman who had been subjected to a so-called Whitehead operation and who presented herself to him with a complete circle of excoriated mucous membrane, extending from one inch outside the anus. It is probable that in this case the operator had sacrificed too much skin.

On the other hand, the upper section of the mucous membrane should be made in the same horizontal plane throughout, in order to prevent subsequent ectropion ani.

The dissection of the mucous membrane from the underlying tissue is exceedingly easy except in some cases of old—or long standing—piles. The attachment of submucous tissue is very loose, and separation can be effected with the finger or with the handle of the scalpel. It is not always possible to dissect the piles completely from the underlying structures, as they may involve not only the mucous but the submucous tissues, and in such cases it is necessary to cut partly through the piles until the healthy mucous membrane above is reached. Repeated attacks of inflammation, of course, render closer the adhesion of the pile area to the underlying structures. In one of my own cases, where the piles had existed for forty years, and had frequently been inflamed, the adhesions to the two sphincters were so close that a few muscular fibres were cut away during the removal.

The amount of blood lost during the operation is surprisingly small. Whitehead states that he has often operated on severe cases and not found it necessary to twist a single vessel. In five of my cases no hæmostasis was necessary. Bleeding is avoided by adhering closely to the mucous membrane in the dissection, as the larger arterioles lie beneath the submucous tissue. The arterial bleeding occurs in those cases of old piles which have been subjected to previous operation or to attacks of inflammation, and in which dilatation of the rectal and anal arteries has taken place secondary to dilatation of the hæmorrhoidal veins. The bleeding from the upper divided edge of the mucous membrane can be reduced to a minimum by following Whitehead's method of inserting the sutures as each portion is divided, or by adopting Marcy's plan of introducing a circle of shoemaker stitches of catgut around the mucous membrane above the piles before cutting the mass away.

Whitehead's advice is in all cases to remove the complete cylinder of mucous membrane, whether or not the whole of this area appears to be diseased. He gives this advice for the reason which I have already stated, that he considers the individual piles as but part of a general pathological condition, involving all the lower hæmorrhoidal veins of the rectum.

Whether we accept this pathological view or not, it is best to follow this plan, and to make a complete circular division of the mucous membrane, as by this method the best surgical results are obtained, and ectropion ani prevented. I have seen a case in which only one-half of the circumference of the mucous membrane of the rectum was removed, and a few hours after the operation an œdematous swelling formed in the other half, which has now resulted in a hæmorrhoidal tumor almost as annoying as the one for which the operation was performed.

In attaching the mucous membrane to the skin, Whitehead uses the interrupted silk suture. He never removes the sutures, but allows them to ulcerate through—a process which is very easily accomplished. In my own cases I have used the continuous catgut suture.

The treatment of these cases after operation is very simple. It is rarely necessary to use opium or the catheter. An opium and belladonna suppository introduced immediately after the operation is in most cases all that is required. The bowels can be moved in from twenty-four hours to four days, and with very little pain. Absence of pain after Whitehead's operation is due to the thorough paralysis of the sphincters, and to the fact that no source of irritation is left beyond that of a clean linear incision, united without tension and without strangulation of tissue.

A glance at the histories of my own cases shows that they were all cases of aggravated hæmorrhoids, in which the piles covered the whole circumference of the lower part of the rectum. In all the cases the disease had existed for many years, and two had been subjected to previous operation by the ligature.

In only one case was there anything like free bleeding during the operation.

In all the cases a suppository of one-half grain of extract of opium and one-half grain of extract of belladonna was introduced immediately after the operation, and this was all the opium required except in three cases, in which one-

[2] New York Medical Journal, October 5, 1889.

sixth grain of morphine was subsequently administered.

The catheter was used in only three cases, and in these for a period not longer than twenty-four hours. The length of time that the case is confined to bed depends to a great degree upon the social standing and the disposition of the patient. In my case it varied from two to ten days. Every case should be able to sit up in four or five days, and to resume work in ten days or two weeks.

The bowels were opened without pain in from twenty-four hours to four days after operation.

No complications of any kind followed these operations. Union takes place quickly, and generally one dressing, taken off when the bowels are moved, is all that is necessary. In no case was there incontinence from paralysis of the sphincters, or any tendency to stricture, from contraction of the scar.

Since the publication of Whitehead's paper his method of operating has been tested by many surgeons. The operation cannot be criticised on surgical grounds, as it is certainly the most perfect plan of treatment, surgically speaking, which has been proposed.

The immediate removal of the tumors, the coaptation of healthy tissues, and primary union, are substituted for slow strangulation by the ligature, or removal by the cautery and healing by granulation.

The applicability, or the necessity, of this operation in all cases of hæmorrhoids, is, however, open to criticism. If we accept Whitehead's views in regard to the pathology of piles, and believe that the whole venous plexus surrounding the anus and the lower end of the rectum, is in a pathological condition in every case of hæmorrhoids, even though there may be present only one or two isolated tumors; then, of course, the complete removal of this area is indicated.

But, that this view is not true is proved by the thousands of cases which have been permanently cured by the ligature and the clamp. The method, however, is indicated in all cases of aggravated hæmorrhoids where the vascular tumors cover the whole or the greater part of the circumference of the bowel. In such cases the operation presents no great difficulties. Statistics show that it is at least as safe as operation by the ligature or the clamp, and it is certainly followed by a more rapid convalescence, and much less pain and discomfort.

Dr. W. D. Green: I have had the pleasure of witnessing only a small number of Whitehead's operations, but I fully agree, and I think that those who have tried the operation will fully agree with Dr. Penrose, that the method of excising through the whole circumference of the bowel, the pile-bearing mucous membrane, and drawing down upon the upper segment and then attaching this to the lower segment without including the skin, has the advantages, first, of removing all possibilities of the return of the trouble; and, secondly, as Dr. Penrose has stated, in making a clear, clean, linear incision around the circumference of the bowel. Nearly all of us have seen the immense amount of suffering which the older operations by means of the clamp and ligatures, and even the cautery, have entailed. In the cases of the new operation which I have seen, recovery has been rapid and complete. In one case, that of a woman well advanced in life, upon the day after operation, when I got to the house, I found her comfortably seated in a rocking-chair. The physician who had the case in charge before the operation had given her freely of some medicine to open the bowels, and on the morning after the operation, without any pain and without any tenesmus, she had a large, well-formed motion. In the old method, in which for days the physician was called upon to administer opium, either by suppository or hypodermically, in large amounts, and in which the patient and the physician both looked forward with dread to the time—five or six, or ten days after the operation—when the bowels were to be opened, is by this method entirely obviated.

I have seen, in the few cases which I have watched, no pocketing or trouble about the line of incision. The two freshly cut surfaces unite very quickly—very much more so, it seems to me, than in mucous surfaces elsewhere. Even when the bowels were moved within twenty-four or thirty-six hours, I was surprised to find that there was no trouble.

It strikes me that the continued suture has advantages over the interrupted. Being introduced and made fast at one point, and then carried out and in around the circumference of the bowel, if catgut be used, at the time when union usually occurs the suture is probably dissolved and passes away without any trouble; or, if silk be used, by simply introducing the scissors and cutting close to the knot and giving an easy pull, the whole suture is removed without any pain or bleeding.

I must confess that the operation presents to me by far the best method of removing the pile-bearing membrane when it exists and involves one-half or more than one-half the membrane around the circumference of the bowel.

(*To be continued.*)

AMYLENE HYDRATE IN EPILEPSY.

Nache agrees with Wildermuth as to the value of amylene hydrate in epilepsy, even where bromides have failed, and where the attacks are not only very frequent but severe. He uses a 10 per cent. solution of the drug, and gives from one to two tablespoonfuls a day (from thirty to ninety grains). Nache also believes that *petit mal* and nocturnal epilepsy are benefited by the drug.

DOMESTIC CORRESPONDENCE.

A General Index for Medical Journals.

To the Editor:—A physician more remarkable for commercial instincts than for scientific attainment, once spoke contemptuously of the library of the late Prof. Jewell, saying that it contained "nothing but a lot of old medical journals." We think he but voiced a sentiment, all too common in the profession, but one we are sure that will meet with little sympathy from the original workers and writers in medicine. To these the files of the standard journals are about the most valuable books to be found in a medical library. In medical societies it is generally possible to pick out the man who subsists largely upon text-book pabulum, and it will be generally observed that he is not the most interesting contributer to the proceedings. The industrious student knows that he has not exhausted a subject until he has gone through the files of the great journals.

We hold it to be axiomatic that any journal that is worth a subscription is worth binding, and no journal that does not have a complete index to each volume is worth binding,—therefore it is not worth taking.

The labor of consulting journals, even when properly bound, is very considerable. The examination of the files of THE JOURNAL necessitates the handling of fourteen volumes and the running of as many indexes. For any one to properly appreciate this work, they should examine the indexes of the last thirty or forty volumes of the *American Journal of the Medical Sciences*. While this labor is somewhat lessened by index *résumés* they are but clumsy excuses for a general index—at least once in five years every medical journal of any importance should issue a general index. The only medical periodical of any importance that does this is *Schmidt's Jahrbücher*, and every earnest worker will agree with us when we say that this feature alone gives an unequaled value to that publication.

In these days of labor saving contrivances it is not too much to ask our publishers to print a general index;—we do not ask that they be given to us, but humbly petition for the privilege of buying them. HAROLD N. MOYER, M.D.

434 West Adams street, Chicago.

A Correction.

To the Editor:—In THE JOURNAL of the 18th inst., in the report of the Mississippi Valley Medical Association Proceedings, your reporter stated that I "reported six cases of gunshot injury of the abdominal cavity in which the viscera were injured, with five recoveries and one death." My paper was *confined* to the report of cases of penetrating *stab* wounds of the abdomen, and hence *gunshot* wounds were not considered. By correcting the mistake in your next issue you will oblige Very truly yours,

H. O. DALTON, M.D.

NECROLOGY.

Robert Stevenson, M.D.

Dr. Robert Stevenson, of Adrian, Mich., died of apoplexy in the city of Vienna, Austria, August 9, 1890. The *Adrian Press*, in an eloquent tribute to his memory says: "The sad news of Dr. Stevenson's death occasioned a general feeling of sorrow, for no man was more widely known among our citizens, and to the people of the county than he, and surely none were more universally esteemed and respected. His skill in his profession, and his genial social nature, gave him a wide popularity, and always made him a welcome visitor in the sick room. He carried perpetual sunshine in his countenance, and under all circumstances, and upon all occasions, was a perfect type of the old-school gentleman, affable, courteous, genial and cheery, yet always maintaining a dignified bearing that proclaimed him the true gentleman. He was a man of broad culture, sympathetic nature, pure character and unquestioned integrity. For many years he had been an honored member of the Presbyterian church. He was also a member of Adrian lodge F. & A. M., of Adrian Commandery.

"He was born in Ireland in August, 1823, and obtained his medical education at the University of Glasgow. His first service was as surgeon on a whaling ship. After a six months' cruise he sought his fortunes in America. He settled in the city of Adrian, where he has since resided and built up a practice that heralds him as one of the leading physicians of the State. Dr. Stevenson became a member of the American Medical Association in 1876, and has usually attended its annual meetings; he was a member of the Michigan Medical Society, and also the Southern Michigan Medical Association. Dr. Stevenson was a delegate from the American Medical Association to the British Medical Association, and to the Tenth International Medical Congress, which was held at Berlin. He was married in 1851, and of eight children born to him, four are now living."

DR. CHARLES STEEL THOMSON, born in Tolland, Conn., April 6, 1801, and a son of Dr. Gurdon Thomson, a medical celebrity of a hundred years ago or more, died recently in New Haven, Conn. He was a graduate of the Yale Medical College, class of 1822, and since 1883 was the oldest living graduate of that institution.

BOOK REVIEWS.

THE DISEASE OF THE SKIN CALLED PAGET'S DISEASE. A contribution to the Study of the Cutaneous Psorospermes and of Certain Forms of Cancer.

MALADIE DE LA PEANDITE MALADIE DE PAGET, par DR. LOUIS WICKHAM. Paris: G. Masson, 1890.

In 1874 Sir James Paget described the peculiar inflammation of the nipple and areola of the breast that preceded the development of cancer. This condition has since been called malignant papillary dermatitis. It remained, however, for Darier (*Sur une forme de psorospermose, ou maladie de Paget. Société de Biologie*, April 13, 1889) to demonstrate the parasitic nature of the affection. He has also contributed several important chapters to this monograph.

The work opens with a definition of Paget's disease, which is said to be a parasitic affection, belonging to the group of cutaneous psorospermes, characterized by chronic inflammation of the skin, its glands, and their ducts, followed by epithelial proliferation. Up to the present this disease has been considered a special affection of the breast and mammæ, but other regions may be affected; there is recorded an undoubted example of its location in the scrotum.

The first portion of the work is devoted to an historical consideration of the literature, etiology, symptomatology and diagnosis. There is little in this portion to call for special remark, as it is largely based upon the older descriptions of the disease.

Chapter ii of the second part contains an unpublished memoir from the pen of Darier on a case of Paget's disease of eleven years' standing, but without epithelioma. The histological investigation included an examination of scales taken from the surface, and a portion of excised skin. The scales were examined directly and after treatment with reagents. The best results were obtained with the iodo-iodide solution of Gram. It is well to macerate large squames in ammonia water before mounting them. Preparations made in this way and stained with hæmatoxlyn brought prominently into view the protoplasmic contents and the eucapsulating membrane. A portion of the excised skin was prepared in osmic acid, but the results were poor; another part hardened in alcohol and stained with picro-carmine showed clearly the relation of the parasite to the diseased structures. Lesions were found in the epidermis and true skin. Darier was not able to obtain a special stain for the parasites. In diagnosticating a case of Paget's disease it is only necessary to scrape the part and look directly for the parasite among the normal epidermal scales. They are recognized by their size, being usually somewhat larger than the cells from the deeper layers of the epidermis. The cyst wall has a distinct double contour, and within this there are frequently two or three and sometimes more protoplasmic bodies containing nuclei. If these structures are hardened in alcohol, a peculiar effect is noted in that the protoplasmic contents shrink away from the cyst wall in places, so that ray-like prolongations extend from and attach the protoplasm to the enveloping membrane. These characteristics are ordinarily sufficient to distinguish this parasite from any cell found in this situation.

The writer made some experimental inoculations upon rodents, but without success. Upon his own skin the writer likewise failed to obtain a growth, though they were kept for eight days in contact with a scarified part. Cultivations were attempted upon damp sterilized sand. At the end of sixteen days the cyst remained perfect, but the protoplasm retracted. The author classifies these bodies in the group of oral psorospermes, and considers them truly parasitic.

The writer refers the development of epithelioma in these cases to a simple cell proliferation brought about by the chronic inflammation due to the presence of the parasite.

The author closes the volume with sixteen conclusions, some of which we have already referred to. He would place Paget's disease in the same class as the vegetating follicular psorospermes, which ought also to include the molluscum contagiosum of Bateman. The disease, while manifesting a strong predilection for the breast, is not confined to that region. The affection is curable in the earlier stages and the treatment should consist not in excision, but the application of antiseptic remedies.

While it is perhaps presumptuous in the writer to criticise the French of this book, there certainly are too many repetitions and too many obscure sentences. They seriously mar a monograph of rare interest and value.

The work is illustrated by four excellent plates, one of which is colored.

FLUSHING AND MORBID BLUSHING; THEIR PATHOLOGY AND TREATMENT. By HARRY CAMPBELL, M.D., B.S. (London). London: H. K. Lewis, pp. 270.

Under this remarkable title the author has gathered a large number of observations on what may practically be described as a minor symptom of instability in the nervous centres. As is now the fashion, these manifestations of vaso-motor irregularity are explained by discharges in cortical brain areas whose existence are as yet hypothetical. A flush is described as "a nerve-storm in which a rush of blood to the skin and a sense of heat are generally the most obtrusive manifesta-

tions." The distinction between flushing and blushing is indefinite with the exception that flushing is usually connected with some sexual irregularity and blushing is excited by some emotion. In justification of the term morbid or pathological blushing a number of cases are cited (p. 135), some of which follow:

Æt. 27 (man). Was a soldier, but compelled by excessive blushing to give up his profession.

Æt. 28 (man). Has recently had to give up the study of medicine through excessive blushing.

Æt. 32 (man), minister. Is so afflicted by blushing that he has latterly entirely given up duty.

Another patient is a commercial traveller (!) and a telephone clerk is so badly affected that he turns scarlet even when speaking through the 'phone. From this list it may be seen that the British male is sometimes slightly effeminate.

Nothing new, important, or useful is brought out in the book, and it is impossible to feel that all the labor it represents has been judiciously expended, when so many important fields of enquiry are open and offering such rich harvests to those who will till them.

MISCELLANY.

HEALTH IN MICHIGAN.—For the month of September, 1890, compared with the preceding month, the reports indicate that puerperal fever, influenza, membranous croup, erysipelas and diphtheria increased, and that measles, inflammation of brain, cholera morbus, cerebro-spinal meningitis and cholera infantum, decreased in prevalence.

Compared with the preceding month the temperature was lower, the absolute humidity was less, the relative humidity was more, the day ozone and the night ozone were less.

Compared with the average for the month of September, in the four years 1886–1889, pleuritis, influenza and scarlet fever were more prevalent, and small-pox, puerperal fever, typho-malarial fever, inflammation of brain, whooping-cough, cerebro-spinal meningitis, typhoid fever and measles were less prevalent in September, 1890.

For the month of September, 1890, compared with the average of corresponding months in the four years 1886–1889, the temperature was lower, the absolute humidity was less, the relative humidity was more, the day ozone and the night ozone were less.

Including reports by regular observers and others, diphtheria was reported present in Michigan, in the month of September, 1890, at 57 places, scarlet fever at 54 places, typhoid fever at 73 places, and measles at 18 places.

Reports from all sources show diphtheria reported at 8 places more, scarlet fever at 6 places more, typhoid fever at 12 places more, and measles at 6 places less in the month of September, 1890, than in the preceding month.

LETTERS RECEIVED.

Clark, Forbes & Co., Miamisburg, O.; Dr. W. W. Arnold, Colorado Springs, Col.; Dr. J. F. Jenkins, Tecumseh, Mich.; Dr. G. E. Frothingham, Detroit, Mich.; Dr. H. W. Blanc, New Orleans; Dr. W. E. Brenneman, Golden, Ill.; Dr. D. N. Jones, Gaylord, Minn.; J. W. Harrison, Jersey City, N. J.; D. A. Beaver, Shermerville, Ill.; D. L. Hughes, Keokuk, Ia.; Dr. Geo. H. Grant, Richmond, Ind.; Dr. Chas. Knapp, Evansville, Ind.; The Victor Safe and Lock Co., Cincinnati, O.; Dr. H. L. Getz, Marshalltown, Ia.; Amesbury Carriage Co., Amesbury, Mass.; Egbert, Fidlar & Chambers, Davenport, Ia.; August Spankus, Milwaukee, Wis.; Dr. P. W. Baer, Pleasant Hill, Neb.; Dr. T. E. Boylan, Cincinnati, O.; Dr. W. T. Belfield, Dr. W. E. Casselberry, Chicago; University of Pennsylvania Press, Dr. John B. Roberts, Dr. J. Solis-Cohen, Philadelphia, Pa.; Dr. E. Cutter, Hunt & Eaton, Dr. M. E. Van Fleet, A. L. Chatterton & Co., W. P. Cleary, Scott & Bowne, The Maltine Manufacturing Co., The Chas. H. Phillips Chemical Co., Frank, Kiernan & Co., New York City; The Subscription News Co., Dr. H. T. Byford, Dr. H. Wardner, Lord & Thomas, Chicago; H. S. Hutchinson & Co., New Bedford, Mass.; Dr. H. R. Guthrie, Sparta, Ill.; Dr. D. W. Grear, Jonesboro, Ill.; Dr. W. W. Gourley, Wallonia, Ky.; R. A. Robinson & Co., Louisville, Ky.; Dr. L. B. Bitz, Blairsville, Ind.; Dr. Louis A. Roller, Detroit, Mich.; Dr. Robt. Reyburn, Washington; The Eastman Co., Rochester, N. Y.; Dr. C. G. Bacon, Fulton, N. Y.; The Antikammia Chemical Co., St. Louis, Mo.; Dr. J. P. West, Bellaire, O.; The DuBois Mfg. Co., Philadelphia; Dr. J. H. Woodward, Burlington, Vt.; D. Machlachlan, Edinburgh, Scotland; Dr. W. L. Worcester, Little Rock, Ark.; Dr. Marie B. Werner, 1010 Clinton St., Philadelphia; Dr. W. C. Wile, Danbury, Conn.; Dr. J. G. Orton, Binghamton, N. Y.; Dr. Albert L. Gihon, Brooklyn, N. Y.; Dr. T. H. Manly, New York City; Thos. F. Goode, Buffalo Lithia Springs, Va.; Dr. J. R. Dunglison, Philadelphia; C. L. Topliffe, New York; Dr. W. E. Brenneman, Golden, Ill.; Dr. J. Stout, Ottawa, Ill.; Dr. J. R. Landers, Fairland, Ill.; Dr. Wm. B. Dewees, Salina, Kan.; Dr. T. D. Crothers, Hartford, Conn.; Dr. Chas. W. Hitchcock, Detroit, Mich.; Methodist Book Concern, New York; Dr. Fisk, Denver, Colo.; Dr. A. C. Mercer, Syracuse, N. Y.; John E. Ruebsam, Washington; Dr. Henry O. Marcy, Boston; Sharp & Smith, Chicago; J. A. Flexner, Louisville; Dr. A. E. Foote, Philadelphia; Dr. Geo. H. Grant, Richmond, Ind.; Cincinnati College of Medicine and Surgery; J. T. Petty, Washington; Dr. J. C. Lange, Pittsburgh, Pa.; Dr. Wm. D. Hamilton, Columbus, O.; Maltine Mfg. Co, New York. Dr. McD. Purcell, Philadelphia; Dr. John Shrady, New York City; Dr. A. N. Bell, Brooklyn, N. Y.; Dr. Paul Gibier, Dr. Henry Macdonald, New York City; Dr. J. C. Laing, Pittsburgh, Pa.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from October 11, 1890, to October 17, 1890.

Capt. Andrew V. Cherbonnier, Medical Storekeeper, retirement from active service on October 12, 1890, by operation of law, under the provisions of the Act of Congress approved June 30, 1882, is announced. By direction of the Secretary of War. Par. 11, S. O. 240, A. G. O., Washington, October 13, 1890.

Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending October 18, 1890.

Surgeon George A. Bright, detached from temporary duty at the Naval Academy, and placed on waiting orders.

Surgeon J. G. Ayres, detached from temporary duty at the Naval Academy, and placed on waiting orders.

P. A. Surgeon George P. Lumsden, detached from the U. S. S. "Boston" and granted three months' leave.

P. A. Surgeon E. W. Auzal, detached from the Naval Academy and ordered to the U. S. S. "Boston."

Surgeon Howard Smith, ordered to appear before the Retiring Board at Mare Island, Cal.